

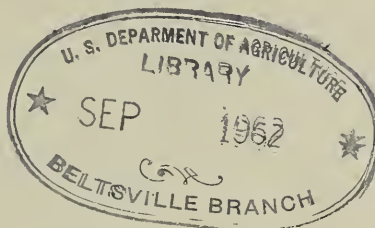
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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
FIELD CROPS RESEARCH BRANCH

Administratively Confidential



RESULTS FROM THE NATIONAL COOPERATIVE COORDINATED
OAT BREEDING NURSERIES FOR 1955

Preliminary report not for publication 1/

Compiled by Franklin A. Coffman, H. C. Murphy, and Harland Stevens

1/ This is a progress report of cooperative investigations containing data, the interpretation of which may be modified with additional experimentation. Publication, display, or distribution of any data or any statements herein should not be made without prior written approval of the Field Crops Research Branch, ARS, USDA, and the cooperating agency or agencies concerned.

Plant Industry Station
Beltsville, Maryland
375CC—January, 1956

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Field Crops Research Branch

(NOT FOR PUBLICATION)

RESULTS FROM THE NATIONAL COOPERATIVE COORDINATED OAT BREEDING NURSERIES FOR 1955

Compiled by Franklin A. Coffman, Senior Agronomist, Oat Investigations,
H. C. Murphy, Principal Pathologist in Charge of Oat Investigations,
and Harland Stevens, Agronomist 1/

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INTRODUCTION

The National Cooperative Coordinated Oat Breeding Nursery Program started in 1924 has been conducted for 32 years and the fall-sown nurseries for 1956, the thirty-third year, are now being grown. The early history of this program was reported in the National Oat Newsletter, Vol. III, appearing early in 1953. Although a few partial summaries have been assembled no complete summary of data obtained on thousands of nurseries grown has been compiled.

The one primary objective in mind when this nursery program was started in 1924 has not been deviated from in the now nearly one-third of a century. That objective was that through cooperative efforts in growing these nurseries, assembling the data thereon and making such available to participants relative values of new oats produced are determined more quickly and accurately than by one state or station working independently.

The merit of the original objective probably is best revealed by the fact that in the last quarter century in this country probably no oat of any considerable importance has been released to farmers that was not previously included as only a numbered entry in one or another or several of these nurseries. This program did not produce these superior oats but it served to more quickly focus attention on them and hence expedite their distribution. Several times in the past quarter century that has proved a real aid to American agriculture. The increased return to farmers resulting from growing these new oats cannot be accurately estimated but likely approaches one billion dollars. These new varieties doubtless have been partially responsible for the increased respect with which oats are now held as we no longer hear oats derisively referred to as "just oats" as was common 25 years ago.

Through the years hundreds have cooperated in this effort and nearly all "small grain men" of the nation have at one time or another been included as cooperators. Further the number of cooperating states and experimental farms has increased from less than a dozen stations in a dozen states until in 1955 45 states and Alaska and some 120 stations cooperated. Totals of 135 yield and 46 hardiness nurseries were seeded in 1954-55. The compilers and experiments under the leadership of each was the same as in 1954. The arrangement of tables and data is the same used in 1954 except that hull percentages of entries in 3 nurseries are included. No attempt is made to include summary results for previous years.

1/ Credit is due Louise J. McGowan for assistance in different phases of compiling data and making calculations on reports on the Northeastern, South Central-Southwestern and Southern Regions; to Esther Becker for similar assistance on the report from the Northwestern Region; to Mary Quinn for final preparation of text and tables throughout the report; and to Dallas E. Western of the Quaker Oats Company for supplying the centrifugal, impact oat dehuller for determining groat percentages of entries in the North Central States Regional Nursery.

KEY TO MAP AND INDEX TO DATA

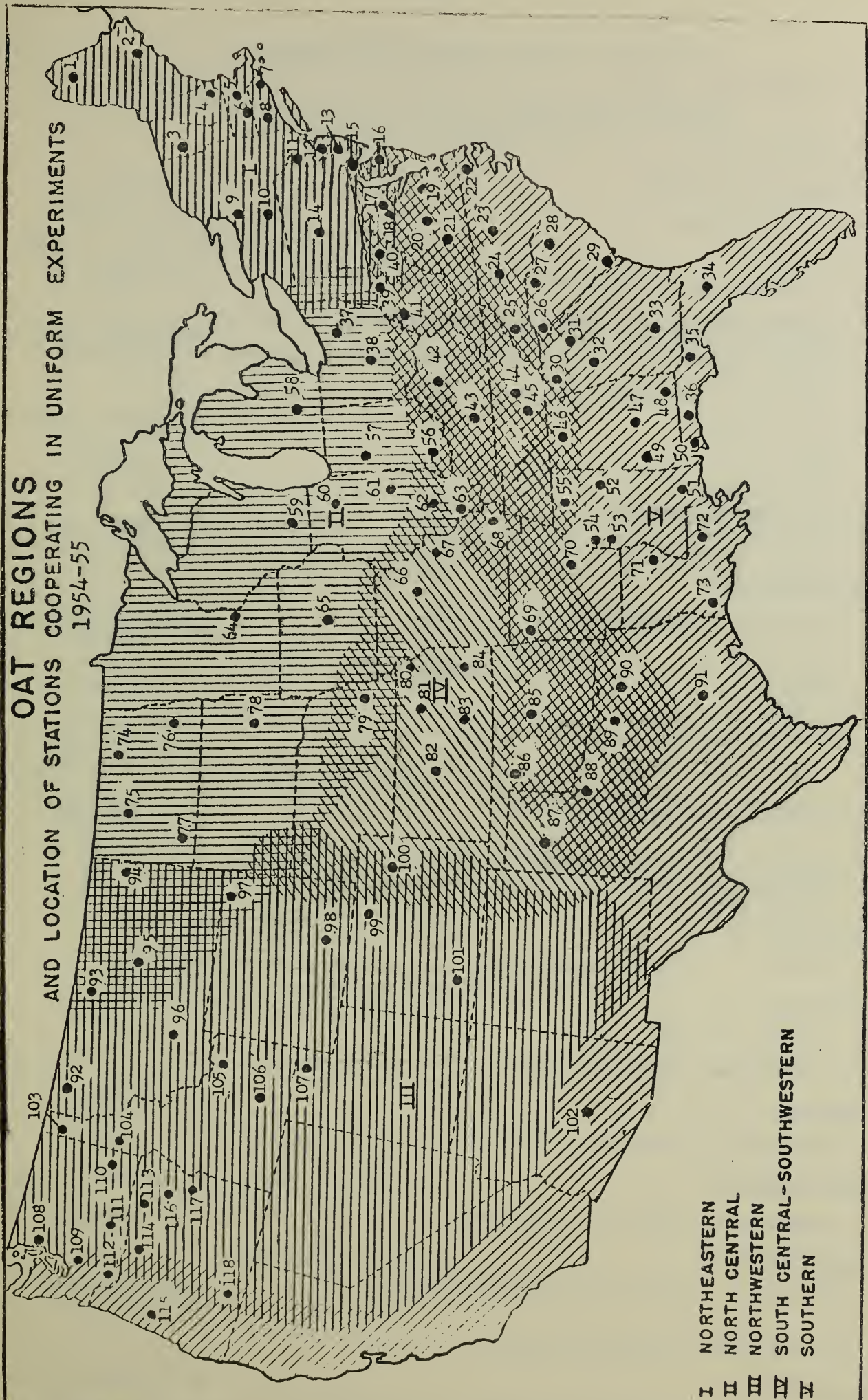
No. on Map	State	Station	Page Nos.	No. on Map	State	Station	Page Nos.
1	Me.	Presque Isle, 16		60	Ill.	DeKalb, 27	
2		Orono, 16		61		Urbana, 27, 126	
3	Vt.	Burlington, 16		62		Brownstown, 67, 82, 126	
4	N.H.	Durham, 16		63		Carbondale, 82, 126	
5	Mass.	Amherst, 126		64	Minn.	St. Paul, 27	
6		Feeding Hills, 16, 82, 126		65	Iowa	Ames, 27, 67, 126	
7	R.I.	Kingston, 82		66	Mo.	Columbia, 27, 67, 126	
8	Conn.	Ellington, 126		67		Pierce City, 82	
9	N.Y.	Aurora, 16		68		Sikeston, 82	
10		Ithaca, 16, 126		69	Ark.	Fayetteville, 82, 96, 126	
11	N.J.	Stewartsville, 16		70		Stuttgart, 96, 126	
12		New Brunswick, 16, 67, 82, 126		71	La.	St. Joseph, 96	
13		Mt. Holly, 67		72		Baton Rouge, 96, 113	
14	Penna.	University Park, 16, 82, 126		73		Crowley, 96, 113	
15	Del.	Newark, 82, 126		74	N.D.	Langdon, 27	
16		Georgetown, 82, 126		75		Minot, 27	
17	Md.	Beltsville, 16, 67, 82, 96, 126		76		Fargo, 27	
18		College Park, 126		77		Dickinson, 27	
19	Va.	Warsaw, 96		78	S.D.	Brookings, 27	
20		Staunton, 126		79	Nebr.	Lincoln, 27, 67	
21		Blacksburg, 67, 82, 126		80	Kans.	Powhattan, 27, 67	
22	N.C.	Plymouth, 96		81		Manhattan, 27, 67	
23		Apex, 96		82		Hays, 67	
24		Statesville, 96, 126		83		Hutchinson, 82	
25		Waynesville, 126		84		Mound Valley, 82	
26	S.C.	Clemson, 96, 126		85	Okla.	Stillwater, 67, 82, 126	
27		Chester, 126		86		Woodward, 126	
28		Hartsville, 96, 113, 126		87	Tex.	Amarillo, 126	
29		Yemassee, 113		88		Chillicothe, 82	
30	Ga.	Blairsville, 126		89		Denton, 67, 96, 126	
31		Athens, 96, 126		90		Greenville, 126	
32		Experiment, 96, 126		91		College Station, 96, 113	
33		Tifton, 96, 113		92	Mont.	Creston, 60	
34	Fla.	Gainesville, 96, 113		93		Havre, 60	
35		Quincy, 96, 113		94		Sidney, 49, 60	
36		Jay, 96, 113		95		Moccasin, 60	
37	Ohio	Wooster, 27		96		Bozeman, 49	
38		Columbus, 27, 67		97	Wyo.	Sheridan, 60	
39	W.Va.	Morgantown, 16, 82, 126		98		Laramie, 49	
40		Wardensville, 82		99	Colo.	Ft. Collins, 49	
41		Pt. Pleasant, 82		100		Akron, 67	
42	Ky.	Lexington, 67, 82, 126		101		Hesperus, 49	
43		Hopkinsville, 82, 126		102	Ariz.	Mesa, 49, 113	
44	Tenn.	Knoxville, 82, 126		103	Ida.	Sandpoint, 60	
45		Crossville, 126		104		Moscow, 60	
46	Ala.	Belle Mina, 96		105		Tetonia, 60	
47		Tallassee, 96, 113		106		Aberdeen, 16, 27, 49	
48		Headland, 113		107	Utah.	Logan, 49	
49		Camden, 96, 113		108	Wash.	Mt. Vernon, 82	
50		Fairhope, 113		109		Puyallup, 60	
51	Miss.	Poplarville, 113		110		Pullman, 60	
52		State College, 96, 126		111		Prosser, 49	
53		Stoneville, 96, 113, 126		112		Vancouver, 82	
54		Stoneville Ped. Seed Co., 96		113	Ore.	Pendleton, 60	
55		Holly Springs, 126		114		Moro, 60, 126	
56	Ind.	Princeton, 82, 126		115		Corvallis, 60, 82	
57		Lafayette, 27, 67, 126		116		Union, 49	
58	Mich.	East Lansing, 27		117		Ontario, 49	
59	Wis.	Madison, 27		118		Klamath Falls, 49	

NOT SHOWN ON MAP

Alaska

Fairbanks, 127
Palmer, 127

OAT REGIONS
AND LOCATION OF STATIONS COOPERATING IN UNIFORM EXPERIMENTS
1954-55



- I NORTHEASTERN
- II NORTH CENTRAL
- III NORTH WESTERN
- IV SOUTH CENTRAL-SOUTHWESTERN
- V SOUTHERN

COOPERATING AGENCIES, STATIONS, AND PERSONNEL *

Note: The asterisk (*) indicates that the data were obtained in cooperation with other agencies of the Agricultural Research Service, U. S. Department of Agriculture.

FIELD CROPS RESEARCH BRANCH

Cereal Crops Section

M. G. Weiss

H. A. Rodenhiser

Oat Investigations and Nurseries in North Central Region

H. C. Murphy

Coordinated Breeding Nurseries and Uniform Winter
Hardiness Nurseries

Franklin A. Coffman
Harland Stevens

Coordinated Breeding Nurseries in Northwest Region

ALABAMA AGRICULTURAL EXPERIMENT STATION

Agronomy and Soils

Howard T. Rogers

Auburn Alabama Polytechnic Institute

F. L. Selman

Botany and Plant Pathology

Auburn Alabama Polytechnic Institute

J. A. Lyle

Branch Stations

Belle Mina Tennessee Valley Substation

Fred Stewart
F. L. Selman

Camden Lower Coastal Plain Substation

V. L. Brown
F. L. Selman

Fairhope Gulf Coast Substation

Otto Brown
Harold F. Yates
F. L. Selman

Headland Wiregrass Substation

C. A. Brogden
F. L. Selman

Tallassee Plant Breeding Area

F. L. Selman

ARIZONA AGRICULTURAL EXPERIMENT STATION

Agronomy

D. F. McAlister

Tucson University of Arizona

A. D. Day

Substation

D. C. Aepli

Mesa Mesa Station

A. D. Day

ARKANSAS AGRICULTURAL EXPERIMENT STATION

Agronomy

D. A. Hinkle

Fayetteville University of Arkansas

R. L. Thurman

Plant Pathology

E. M. Cralley

Fayetteville University of Arkansas

H. R. Rosen

Branch Station

Stuttgart Rice Branch Experiment Station

Francis Williams
R. L. Thurman

COLORADO AGRICULTURAL EXPERIMENT STATION

Agronomy

D. W. Robertson

Fort Collins Colorado State College of Agriculture

D. W. Robertson
T. E. Haus

COLORADO AGRICULTURAL EXPERIMENT STATION (continued)

Branch Stations

*Akron	U. S. Dry Land Field Station	J. F. Brandon D. W. Robertson
Hesperus	Fort Lewis Substation	A. E. Corfman H. O. Mann

DELAWARE AGRICULTURAL EXPERIMENT STATION

Agronomy

Newark	University of Delaware	C. E. Phillips F. B. Springer
Georgetown	Georgetown Substation	A. T. Ringrose F. B. Springer

FLORIDA AGRICULTURAL EXPERIMENT STATION

Agronomy

Gainesville	University of Florida	Fred H. Hull A. T. Wallace
-------------	-----------------------	-------------------------------

Botany and Plant Pathology

Gainesville	University of Florida	Phares Decker H. H. Luke R. W. Earhart
-------------	-----------------------	--

Branch Stations

Quincy	North Florida Experiment Station	W. C. Rhoades W. H. Chapman
Jay	West Florida Experiment Station	C. E. Hutton H. W. Lundy

GEORGIA AGRICULTURAL EXPERIMENT STATION

Agronomy

Experiment	Agricultural Experiment Station	S. V. Stacy U. R. Gore
Tifton	Coastal Plain Experiment Station	G. W. Burton D. D. Morey S. A. Parham U. R. Gore

Branch Stations

Blairsville	Mountain Branch Station	J. E. Bailey U. R. Gore
-------------	-------------------------	----------------------------

GEORGIA COLLEGE OF AGRICULTURE

Agronomy

Athens	University of Georgia	T. H. Rogers Acton R. Brown
--------	-----------------------	--------------------------------

IDAHO AGRICULTURAL EXPERIMENT STATION

Agronomy

Moscow	University of Idaho	K. H. Klages K. H. Klages
--------	---------------------	------------------------------

IDAHO AGRICULTURAL EXPERIMENT STATION (continued)

Branch Stations

Aberdeen	Branch Experiment Station	E. Owens Harland Stevens Frank C. Petr
Sandpoint	Branch Experiment Station	C. T. Brackney
Tetonia (St. Anthony)	High Altitude Branch Experiment Station	Hugh C. McKay Jerry Ames

ILLINOIS AGRICULTURAL EXPERIMENT STATION

Agronomy

Urbana	University of Illinois	M. B. Russell C. M. Brown O. T. Bonnett
--------	------------------------	---

Plant Pathology

Urbana	University of Illinois	M. B. Linn Wayne M. Bever R. M. Takeshita
--------	------------------------	---

Branch Stations

Carbondale	Horticultural Experiment Station	C. M. Brown Ed. F. Sullivan
------------	----------------------------------	--------------------------------

INDIANA AGRICULTURAL EXPERIMENT STATION

Agronomy

Lafayette	Purdue University	J. B. Peterson F. L. Patterson
-----------	-------------------	-----------------------------------

Botany

Lafayette	Purdue University	J. R. Shay R. M. Caldwell J. F. Schafer L. E. Compton
-----------	-------------------	--

Branch Stations

Princeton	Frank MacRobert's Farm	R. M. Caldwell L. E. Compton J. F. Schafer F. L. Patterson
-----------	------------------------	---

IOWA AGRICULTURAL EXPERIMENT STATION

Agronomy

Farm Crops		W. H. Pierre I. J. Johnson
Ames	Iowa State College	K. J. Frey H. C. Murphy R. E. Atkins S. C. Wiggans Kiyoshi Sadanaga Roger Grindeland

Botany and Plant Pathology

Ames	Iowa State College	W. H. Bragonier J. A. Browning H. C. Murphy M. D. Simons S. C. Wiggans L. J. Michel
------	--------------------	--

Genetics

Ames	Iowa State College	J. W. Gowen Kiyoshi Sadanaga
------	--------------------	---------------------------------

KANSAS AGRICULTURAL EXPERIMENT STATION

Agronomy

Manhattan Kansas State College

R. V. Olson

E. G. Heyne
A. J. Casady

Botany and Plant Pathology

Manhattan Kansas State College

S. M. Pady

C. O. Johnston
E. D. Hansing
M. D. Huffman
W. C. Haskett

Branch Stations

Hays Ft. Hays Branch Experiment Station

W. W. Duitsman
W. M. Ross

Kingman Hutchinson Field

Walter Moore
E. G. Heyne

Mound Valley Branch Experiment Station

Lloyd Jones
E. G. Heyne

Powhattan Corn Belt Experiment Farm

Clyde Wassom
A. J. Casady

KENTUCKY AGRICULTURAL EXPERIMENT STATION

Agronomy

Lexington University of Kentucky

G. T. Webster

V. C. Finkner

Branch Stations

Hopkinsville William G. Duncan's Farm

James F. Shane
V. C. Finkner

LOUISIANA AGRICULTURAL EXPERIMENT STATION

Agronomy

Breeding Projects

M. B. Sturgis

M. T. Henderson

Baton Rouge Louisiana State University

John P. Gray

Botany, Bacteriology and Plant Pathology

Baton Rouge Louisiana State University

J. P. Chilton

H. E. Wheeler

Branch Stations

Crowley Rice Experiment Station

R. K. Walker
David E. Black
N. E. Jodon

St. Joseph Northeast Louisiana Station

C. B. Haddon
J. A. Hendrix
J. P. Gray

MAINE AGRICULTURAL EXPERIMENT STATION

Agronomy

Orono College of Agriculture

Roland A. Struchtemeyer

L. H. Taylor

Branch Stations

Presque Isle Arcostock Farm

R. M. Cobb
L. H. Taylor

MARYLAND AGRICULTURAL EXPERIMENT STATION

Agronomy

College Park University of Maryland

A. O. Kuhn

R. G. Rothgeb

BELTSVILLE, MARYLAND, AGRICULTURAL RESEARCH SERVICE

Beltsville Cereal Crops Section --- Oats

F. A. Coffman
W. Q. Loegering
Clemmer Marcus
Rowland Geis
Harry Marshall

MASSACHUSETTS, WEST SPRINGFIELD

Feeding Hills Eastern States Farmer's Exchange

E. K. Walrath
I. K. Bespalow
W. A. Rosenau

MICHIGAN AGRICULTURAL EXPERIMENT STATION

Farm Crops

East Lansing State College of Agriculture and
Applied Science

K. T. Payne

John Grafius

Botany and Plant Pathology

East Lansing State College of Agriculture and
Applied Science

W. B. Drew

R. C. Kiesling

MINNESOTA AGRICULTURAL EXPERIMENT STATION

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St. Paul University of Minnesota

W. M. Myers

W. M. Myers
Francis K. S. Koo
R. S. Caldecott

Botany and Plant Pathology

St. Paul University of Minnesota

J. J. Christensen

M. B. Moore
B. J. Roberts

MISSISSIPPI AGRICULTURAL EXPERIMENT STATION

Plant Pathology and Physiology

Mississippi State College

S. S. Ivanoff

Branch Stations

Stoneville Delta Branch Experiment Station

W. L. Giles
Donald Bowman
H. H. Luke
P. G. Rothman

Poplarville South Mississippi Branch Station

T. E. Ashley
S. S. Ivanoff

Holly Springs North Mississippi Branch Station

S. P. Crockett
S. S. Ivanoff

MISSISSIPPI, STONEVILLE

Stoneville Stoneville Pedigreed Seed Company

George R. Walker
C. W. Manning

MISSOURI AGRICULTURAL EXPERIMENT STATION

Field Crops

Columbia University of Missouri

M. S. Offutt

J. M. Poehlman
M. D. Whitehead

Branch Stations

Pierce City

Carl Hayward
J. M. Poehlman

Sikeston

Norman Brown
J. M. Poehlman

MONTANA AGRICULTURAL EXPERIMENT STATION

Agronomy

Bozeman Montana State College

A. H. Post

R. F. Eslick
Howard Rhoades

Branch Stations

Havre North Montana Branch Station

J. J. Sturm
Lawrence O. Baker
David Ferguson

Moccasin Central Montana Branch Station

J. L. Krall
Howard Rhoades
Arthur Dubbs

Creston Northwestern Montana Branch Station

Vern Stewart

Sidney Eastern Montana Branch Station

Glenn P. Hartman

NEBRASKA AGRICULTURAL EXPERIMENT STATION

Agronomy

Lincoln University of Nebraska

D. G. Hanway

V. A. Johnson
John W. Schmidt

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION

Agronomy

Durham University of New Hampshire

R. L. Donahue

L. J. Higgins

NEW JERSEY AGRICULTURAL EXPERIMENT STATION

Farm Crops

New Brunswick

G. H. Ahlgren

Steven Lund^{a/}

Stewartsville

Steven Lund^{a/}

Mt. Holly

Steven Lund^{a/}

NEW YORK AGRICULTURAL EXPERIMENT STATION

Plant Breeding

Ithaca Cornell University

R. P. Murphy

Neal F. Jensen
E. J. Kinbacher

Plant Pathology

Ithaca Cornell University

G. C. Kent

L. J. Tyler
W. F. Rochow

^{a/}Conducts experiments both in agronomy and plant pathology.

NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Agronomy

E. T. York

Agronomy (Field Crops)

G. K. Middleton^{b/}

Raleigh University of North Carolina

T. T. Hebert

Plant Pathology

D. E. Ellis

Raleigh University of North Carolina

T. T. Hebert
N. F. Sommers

Branch Stations

Apex McCullers Branch Station

W. C. Allsbrook
T. T. Hebert

Waynesville Mountain Branch Station

Ray Whisenhant
T. T. Hebert

Statesville Piedmont Branch Station

J. W. Hendricks
T. T. Hebert

Plymouth Tidewater Branch Station

J. L. Rea
T. T. Hebert

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agronomy

T. E. Stoa

Fargo North Dakota Agricultural College

G. S. Smith

Langdon Langdon Substation

V. Sturlaugson
G. S. Smith

Dickinson Dickinson Substation

R. J. Douglas
T. J. Conlon

Minot North Central Substation

G. N. Geiszler
K. L. Lebsock

OHIO AGRICULTURAL EXPERIMENT STATION

Agronomy

G. W. Volk

Wooster Ohio Agricultural Experiment Station

C. A. Lamb
W. P. Byrd

Plant Pathology

B. S. Meyer

Wooster Ohio Agricultural Experiment Station

Lansing P. Williams

Columbus Ohio State University

W. P. Byrd
Wayne Ellett

OKLAHOMA AGRICULTURAL EXPERIMENT STATION

Agronomy

H. F. Murphy

Stillwater Oklahoma Agricultural and
Mechanical College

A. M. Schlehuber
Byrd C. Curtis

Botany and Plant Pathology

W. W. Hansen

Stillwater Oklahoma Agricultural and
Mechanical College

H. C. Young

^{b/}On leave.

OKLAHOMA AGRICULTURAL EXPERIMENT STATION (continued)

Branch Stations

Woodward	Southern Great Plains Field Station	R. A. Hunter A. M. Schlehuber Byrd C. Curtis
----------	-------------------------------------	--

OREGON AGRICULTURAL EXPERIMENT STATION

Farm Crops

Corvallis	Oregon State College	D. D. Hill R. E. Fore W. E. Foote Tom Weblen
-----------	----------------------	---

Branch Stations

Moro	Sherman Branch Experiment Station	W. E. Hall
Ontario	Malheur Experimental Area	E. N. Hoffman
Pendleton	Pendleton Branch Experiment Station	M. M. Oveson C. R. Rohde
Klamath Falls	Klamath Experimental Area	A. E. Gross
Union	Eastern Oregon Branch Station	H. G. Avery Marr Waddoups

PENNSYLVANIA AGRICULTURAL EXPERIMENT STATION

Agronomy

State College	Pennsylvania State College	H. B. Sprague C. S. Bryner
---------------	----------------------------	-------------------------------

Branch Stations

Landisville		C. S. Bryner
-------------	--	--------------

RHODE ISLAND AGRICULTURAL EXPERIMENT STATION

Agronomy

Kingston	University of Rhode Island	T. E. Odland R. S. Bell
----------	----------------------------	----------------------------

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Agronomy

Clemson	Clemson Agricultural College	G. H. Collings E. B. Eskew
---------	------------------------------	-------------------------------

Botany and Bacteriology

Clemson	Clemson Agricultural College	G. M. Armstrong R. W. Earhart
---------	------------------------------	----------------------------------

SOUTH CAROLINA, HARTSVILLE

Hartsville	Coker's Pedigreed Seed Co.	Robert Coker J. Winston Neely S. J. Hadden
------------	----------------------------	--

Branch Station Farms

Yemassee	Coker's Pedigreed Seed Co.	S. J. Hadden
Chester	Coker's Pedigreed Seed Co.	S. J. Hadden

SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agronomy

Brookings South Dakota State College

W. W. Worzella

Plant Pathology

Brookings South Dakota State College

V. A. Dirks

C. M. Nagel

L. S. Wood

TENNESSEE AGRICULTURAL EXPERIMENT STATION

Agronomy

Eric Winters

Botany

A. J. Sharp

Knoxville University of Tennessee

N. I. Hancock^{c/}

Branch Stations

Crossville Plateau Experiment Station

J. A. Odom

N. I. Hancock

Jackson West Tennessee Experiment Station

B. P. Hazelwood

N. I. Hancock

TEXAS AGRICULTURAL EXPERIMENT STATION

Agronomy (Corn and Small Grains)

J. B. Page

College Station Agricultural and Mechanical
College of Texas

I. M. Atkins

G. W. Rivers

E. S. McFadden

Plant Pathology

G. W. Watkins

College Station Agricultural and Mechanical
College of Texas

M. C. Futrell

Branch Stations

Denton Substation No. 6

D. E. Weibel

J. H. Gardenhire

Greenville Cotton Field Station

D. D. Porter

Amarillo Soil Conservation Investigations
(Bushland)

K. B. Porter

Chillicothe Substation No. 12

J. R. Quinby

K. B. Porter

UTAH AGRICULTURAL EXPERIMENT STATION

Agronomy

D. W. Thorne

Logan Utah State Agricultural College

R. W. Woodward

VERMONT AGRICULTURAL EXPERIMENT STATION

Agronomy

A. R. Midgley

Burlington University of Vermont

T. R. Flanagan

^{c/}Conducts agronomic experiments with oats.

VIRGINIA AGRICULTURAL EXPERIMENT STATION

Agronomy

Blacksburg Virginia Polytechnic Institute

H. L. Dunton
T. M. Sterling

Plant Pathology and Physiology

Blacksburg Virginia Polytechnic Institute

S. A. Wingard
C. W. Roane

Branch Stations

Staunton Shenandoah Valley Field Station

P. T. Gish
T. M. Starling

Warsaw Eastern Virginia Field Station

H. M. Camper
T. M. Starling
C. W. Roane

WASHINGTON AGRICULTURAL EXPERIMENT STATION

Agronomy

Pullman State College of Washington

B. R. Bertramson
S. P. Swenson
F. C. Elliott

Plant Pathology

Pullman State College of Washington

G. W. Fischer
C. S. Holton

Branch Stations

Prosser Irrigated Experiment Station

H. P. Singleton
R. W. VanKeuren

Puyallup Western Washington Experiment Station

D. R. Peterson
H. M. Austenson

Mt. Vernon Northwestern Washington Experiment Station

M. W. Carstens

Vancouver Southwestern Washington Experiment Station

R. H. Griffin

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION

Agronomy and Genetics

Morgantown West Virginia University

G. G. Pohlman
Collins Veatch

Plant Pathology

Morgantown West Virginia University

J. G. Leach
E. S. Elliott

Branch Stations

Wardensville Raymann Memorial Farms

C. J. Cunningham
Collins Veatch

Point Pleasant Ohio Valley Substation

D. R. Browning
Collins Veatch

WISCONSIN AGRICULTURAL EXPERIMENT STATION

Agronomy

Madison University of Wisconsin

D. C. Smith
H. L. Shands
D. C. Arny

Plant Pathology

Madison University of Wisconsin

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THE NATIONAL COOPERATIVE COORDINATED OAT BREEDING NURSERY

In 1955 the largest oat crop in national history was produced. The total yield exceeded 1.5 billion bushels for the first time and was 4 percent greater than the previous record yield, harvested in 1945. This high yield was especially gratifying when it is realized that in some large areas weather conditions were not favorable and oat yields were below average. The harvested acreage of oats in 1955 was close to one million acres below that harvested in 1945 and nearly 1.5 million acres below that harvested in 1954. These facts indicate the high degree of success of oat breeders of this country in producing oat varieties that have high yield potentials, capable of excellent yields when reasonably favorable weather conditions prevail.

Oats in much of the South were seeded in dry seed beds which delayed emergence and resulted in the crop going into the winter in poor conditions in many areas. Winter temperatures in 1954-55 were not especially severe and fall-sown oats came through the winter in fair to good condition. However an unusually late freeze occurred late in March when oats in many areas of the South were in the jointing stage. As a result in a wide region from Texas to the Atlantic Coast oats in many fields were frozen to the ground. Many less hardy oats were almost completely eliminated by this freeze and such yields as were obtained on many stations were produced only by secondary tillers that were produced after the freeze. Hence usually only the more hardy fall sown varieties yielded well in the central and southern areas in 1955.

The season of 1955 was especially favorable only in the eastern half of the greatest area of production, the North Central Region, and the yields from that area offset poor yields everywhere else. Droughty conditions in the Northeast, the western part of the North Central Region, and in the Southwest reduced yields. Also a rather prolonged cold spring was experienced in the Northwest which resulted in late seeding and reduced yields in some areas. Rusts were not a serious factor anywhere in 1955 which doubtless partially accounts for the exceptionally high national yield for the season.

In 1955 cooperative yield and/or hardiness nurseries were seeded on 120 stations in 45 states and Alaska. Yield data are reported on a total of 124 nurseries; 51 fall sown, 71 spring sown and 2 in Alaska. No reports were received from 11 nurseries. For purposes of reporting on data from these experiments the United States is divided into five regions: Northeastern, North Central, Northwestern, South Central-Southwestern and the Southern Region. The data from the two points in Alaska are reported separately. As in previous reports the data from the different experiments are reported on by regions except for data from the two experiments; Uniform Spring Sown Red Oat Experiment and the Uniform Special Winter Oat Experiment. Stations located in each of all five oat regions are cooperating in these two nurseries.

Data on special disease tests of entries in these nurseries and data on groat percentages are included together with the agronomic data in the report on the same nursery. A summary of data obtained in the Uniform Winter Hardiness Nursery is also included for the sake of completeness of the years' results.

Data from each experiment are reported on separately and except as noted above the data are reported by regions.

NORTHEASTERN REGION

Until comparatively recent years winter oats have not been given much consideration in the region. Fall seeded oats remain of minor importance as compared with the spring sown crop but with the production of hardier varieties the acreage of winter oats is expanding. However they may still remain of minor importance compared with spring oats for some years. As a result data on fall sown oat experiments grown in the Northeast are reported in the Southern section of this report and only those with spring oats are included in this section of this report.

The winter of 1954-55 was not unusually cold and survivals of hardier oats was comparatively good. Even so the less hardy entries killed badly. The season was not exceptionally favorable to spring seeded oats because of spring drought, especially in western New York and northern Pennsylvania where even the pastures were at one time almost completely dried up. In the southern part of the region, which extends from the Canadian border to southern Maryland and southern West Virginia the season was more favorable. Ample rainfall received in that area and fair yields were obtained even at Beltsville, Md., where oats of the type generally most productive in the more northern part of the region are so late in maturing they usually suffer from the advent of warm weather while still in the more active stages of development. This year the yields were high although test weights were no better than usual at Beltsville. As in the past only one uniform nursery was spring seeded in the region.

Uniform Northeastern States Oat Nursery

In 1955 this nursery was seeded on 12 stations in 9 states. Two nurseries were grown at Feeding Hills, Mass.; one was sown early and the other late sown. Stations cooperating in 1955 were as follows:

Maine - Presque Isle	N. J. - New Brunswick
Orono	Stewartsville
N. H. - Durham	N. Y. - Ithaca
Vt. - Burlington	Penna. - University Park
Mass. - Feeding Hills (Early Seeded)	W. Va. - Morgantown
Feeding Hills (Late Seeded)	Md. - Beltsville

In addition to the above an observational nursery was grown at Aberdeen, Idaho, and entries were included in disease nurseries at Beltsville, Md., and Ames, Iowa.

The nursery in 1955 included 32 entries. For the most part these resulted from breeding projects conducted in the North Central Region, although 8 of the 32 entries were produced in Canada. In the northern part of the region Canadian varieties usually have outyielded those from the North Central States. Only 2 entries included in this nursery were actually produced in the region. Two oats produced elsewhere were released by states in the area. This information would clearly indicate the fact that oat breeding in the region has not been extensive.

Special attention is called to the statement appearing under North Central Region, Uniform North Central States Oat Nursery. A correction is made as to the parents of C.I. 6537. Its real parents are (Victoria x Hajira-Banner) x Colo and not Clinton x Ukraine as previously listed.

Data on this nursery are included in Tables 1 to 8 inclusive. Table 1 gives the derivation of the entries and Table 2 the summary data for the experiments conducted in 1955.

Yield, Bushels per Acre

Yields on entries in this experiment received from 12 stations were, on the average, slightly above those obtained in 1954. A total of 15 entries averaged in excess of 60 bushels per acre. The highest yielding entry was C.I. 6641 which averaged 64.7 bushels per acre. This is a Clinton x (Boone-Cartier) strain selected at Purdue, Ind. Rodney, Simcoe, Ajax and Beaver, all Canadian oats, ranked next with yields of 63.8, 63.8, 63.6 and 63.4 bushels per acre respectively. The poorest yielder in 1955 was Tama, the Helminthosporium victoriae susceptible check. It averaged only 47.1 bushels per acre. Although data are recorded as from 12 stations, those from Cornell are averages from two points as they include yields from a test grown at Aurora, N. Y., also.

Test Weight.

Data on test weights were received from 11 stations. Test weights in 1955 were low as only 7 entries averaged 32 pounds or more. The heaviest test weight, 33 pounds, was recorded for C.I. 6752. Mo. 0-205 ranked second with an average of 32.8 pounds, whereas Minland testing 27.4, Abegweit 27.6 and Tama 28.7 pounds per bushel ranked lowest. The low average test weights for the region were due primarily to the low test weights recorded at Beltsville, New Brunswick and Stewartsville.

Hull Percentage

Data on weight of 1000 kernels and hull percentages of oats in this nursery were obtained at West Springfield, Mass. These determinations were made on both oats grown from the seeding made April 18, the usual seeding date, and those sown on May 8, a late seeding. Hull percentages were much higher in the late sown oats where as kernel weights were much inferior to those from the earlier seeding.

Roxton oats from the earlier seeding date weighed most - 39.1 grams per 1000 kernels and they had the lowest percent of hulls whereas Mo. 0-205 had the lightest kernels yet only two others had a lower percent of hull. In the late sown oats Clarion had very heavy kernels per 1000 and ranked among the lowest entries in hull percentage however Roxton kernels had a lower percent of hulls than Clarion. The records were 23.2 percent for Roxton and 25.5 percent for Clarion. Data were received on hull percentages of oats grown at several additional points but such reports arrived too late to be included in this report.

Plant Height

Data on plant height were reported from 9 stations. Oats grew shorter in 1955 than in most recent seasons. Except for Roxton, which averaged 41.3 inches tall none averaged in excess of 40 inches in height and only 9 exceeded 35 inches. The shortest entry was Craig which averaged 30.0 inches tall. Clintland, Clinton 59, Tama and C.I. 6752 all averaged under 32 inches tall.

Standing Ability

Lodging was observed on 7 stations. As oats were short lodging naturally was less than usual. Lodging exceeded 10 percent in only 5 entries. These were Tama, Fortune and C.I. No's. 6936, 6938 and 6641. Lodging in these 5 entries averaged 19.9, 15.6, 12.9, 11.0 and 10.1 percent respectively. Lodging was least in Clinton, Clintland, Improved Garry and Mohawk. It averaged less than 1.0 percent in each of these 4 entries.

Date Headed

A total of 9 stations reported on date of heading. All entries headed in June on the average. The earliest to head were C.I. No's. 6913, 6936, and 6537. All headed June 19. Victory, Roxton, Rodney, which headed June 30, June 29 and June 27 respectively were the latest entries in the nursery whereas Simcoe, Fortune, Craig, Abegweit and C.I. No's. 6938 and 6940 had heading dates of June 26.

Date Ripe

Only 3 reports on date ripe were received. All entries ripened in July. The range from earliest to latest was from July 18 for C.I. 6936 to July 27 for Roxton. Most entries ripened during the period July 20 to 24.

Straw and Forage

At Durham, N. H., data were obtained on yields of straw. Yields ranged from as low as 1.38 and 1.42 tons per acre for Clinton 59 and Clintland respectively to as high as 3.41, 3.12 and 3.10 tons per acre for C.I. No's. 6938, 6940 and for Rodney. As straw is of considerable importance in the Northeastern States, data on straw yields in oats are of considerable interest in the area.

Reaction to Disease

Data on reaction to disease of entries in this nursery were received from 6 stations in 1955. Data on crown rust were received from Beltsville, Md., and Durham, N. H. At Beltsville 6 entries were resistant to crown rust. These were Tama, Clintland, Shelby and C.I. No's. 6935, 6936, and 6913. All were indicating as being infected by crown rust at Durham, New Hampshire.

Stem rust reactions were recorded on 3 stations. At Beltsville, except for Improved Garry and C.I. 6913 all entries were susceptible. Very small percentages were recorded on 4 entries at Durham and only a trace infection was recorded for 3 entries at Ithaca.

Observations on smut infection received from 3 points indicate Roxton, Ajax and Victory were most susceptible. Septoria data from Feeding Hills, Mass., indicate Sauk, Rodney, and Roxton were most affected and that Shelby and C.I. No's. 6913 and 6642 were most affected by H. avenae. Data on Red Leaf reported from Presque Isle, Maine, indicate no entry was free from this trouble but that among those most affected were C.I. No's. 6913, 6936, Mo. O-205 and Tama. All were given readings of 50 percent or more.

Table 1. Entries included in the Uniform Northeastern States Nursery grown in 1955.

C.I. No.	Variety or hybrid	Selection	Source
560	Victory (old check)	Sel. from Milton at Svalof, Sweden	Check
3502	Tama: Victoria x Richland (check)	Sel. 35-548	Check Iowa
4134	Roxton: (Siberian x Joannette) x (OAC 72 x Early Ripe)	Canada	Canada
4157	Ajax: Victory x Hajira (check)	R.L. 1114	Canada
4259	Clinton "59": D69 x Bond (check)	XM 3218-35-1335-3-10	Check Ind., Iowa
4327	Mohawk: Bond x D67 (check)	Sel. No. 1307-9	Check Iowa, N.Y.
4372	Shelby: Anthony x Bond	36-1112-7-9	Check Iowa
4521	Beaver: Vanguard x Erban	Canada	Canada
4970	Abegweit: Vanguard x Erban	C.A.N. 693	Canada
4988	Mo. O-205: Columbia x (Victoria-Richland)	Mo. 04205	Missouri
5226	Fortune: Victory x (Victoria-Richland x Bannock)	Winnipeg O.T. 300	Canada
5332	Craig: Ithacan x Victoria	N.Y. 5261-14-9-9 Sel. 77	N. Y.
5440	Waubay: Clinton x Marion	Idaho B-173-2850	U.S.D.A., Iowa, S.D.
5441	Jackson: Clinton x Marion	Idaho B-196-3006	U.S.D.A., Iowa, Mich.
5647	Clarion: Clinton x Marion	Regel. B194-9	U.S.D.A., Iowa, Maine
5869	Clintafe: Clinton ³ x Santa Fe	117-1 Ab. 93	Iowa
5946	Sauks (Forward x Victoria-Richland) x Andrew	Wis. X345-1	Wisconsin
6537	(Victoria x Haj-Banner) x Colo	Iowa Sel. 49-2166	Iowa
6641	Clinton x Boone-Cartier	Ind. A422A1-48-3-2	Ind.
6642	Newton: Nemaha x (Cl. x Boone-Cart.)	Ind. 436A2-2-4-1	Ind.
6661	Rodney: (Victoria x Hajira-Banner) x Roxton	RL. 2123 OT 130	Canada
6662	Improved Garry: Victory x (Vict. x Haj-Banner)	RL. 1692.27 OT 139	Canada
6701	Clinton: Landhafer x Clinton ⁴	B4916A3-4	Ind.
6752	Beacon x (Hawkeye x Vict.)	Wisc. x 436-2	Wisconsin
6765	Minland: Landhafer x (Mindo x Hajira-Joannette)	Minn. II-46-3	Minn.
6767	Simoes: Ajax x Erban	Canada	Canada
6913	(Bond - Rainbow x Hajira-Joannette) x Landhafer	Minn. II-47-25	Minn.
6935	Landhafer x (Mindo x Hajira-Joannette) x Clinton	Minn. II-50-12	Minn.
6936	Landhafer x (Mindo x Hajira-Joannette) x Andrew	Minn. II-50-51	Minn.
6938	Forward ² x (Victoria-Richland)	Wisc. X304-8	Wisconsin
6939	[(Victoria x Haj.-Banner): R.L. 1273] x Spooner	Wisc. X342-1-1	Wisconsin
6940	N. Y. Sel.: Goldwin x Clinton	N.Y. Sel. 611B-176-9	N. Y.

Table 2. Summary of data obtained on the Uniform Northeastern States Oat Experiment grown in 1955.

Rank in yield	C.I. No.	Variety or selection	Acre yield (12 Sta) Bu.	Test wt. (11 Sta) Lbs.	Plant ht. (9 Sta) Ins.	Lodg- ing (7 Sta) Pct.	Date head (9 Sta)	Feeding Hills, Mass.			
								Wt. of 1000 Kernels	Wt. of 1000 Hulls	Pct. of 1000 Kernels	Pct. of 1000 Hulls
1	6641	Clinton x Boone-Cartier	64.7	31.0	34.1	10.1	6/24	32.0	24.0	26.7	29.7
2	6661	Rodney	63.8	31.4	35.4	5.3	27	35.0	23.2	28.9	27.0
3	6767	Simcoe	63.8	30.0	36.4	5.7	26	29.7	25.1	25.7	31.5
4	4157	Ajex (ck)	63.6	29.1	36.3	6.1	24	28.0	27.2	25.9	35.2
5	4521	Beaver 2	63.4	29.6	36.6	3.9	24	35.3	24.0	29.2	27.1
6	6938	Forward ² x Vict.-Rich.	63.2	31.5	35.9	11.0	26	28.4	28.5	25.5	34.2
7	6537	(Vict. x Haj.-Banner) x Colo	62.6	32.0	33.0	6.9	19	35.7	22.9	25.3	24.8
8	5226	Fortune	62.5	28.9	36.9	15.6	26	29.2	24.7	25.6	29.4
9	5332	Craig	61.6	30.1	30.0	4.3	26	33.2	27.6	29.8	28.6
10	6662	Improved Garry	61.6	29.1	35.3	.9	24	30.6	27.8	28.8	33.0
11	6940	N. Y. Sel.	61.3	29.9	34.6	1.6	26	28.3	25.5	26.2	30.2
12	4970	Abegweit	61.2	27.6	33.9	6.6	26	32.6	27.5	31.2	29.9
13	5441	Jackson	61.1	32.3	34.0	3.1	22	29.4	27.2	27.4	30.5
14	4988	Mo. O-305	60.9	32.8	34.6	9.7	20	25.0	23.2	24.7	25.5
15	5946	Sauk	60.8	28.9	34.0	4.4	25	32.5	26.7	27.8	28.5
16	6939	R.L. 1273 x Spooner	59.7	32.6	36.9	8.4	22	33.4	26.0	29.2	30.5
17	6936	Land. x (Mindo x H-J) x Andrew	58.7	30.9	33.1	12.9	19	29.5	24.5	29.9	24.7
18	6935	Land. x (Mindo x H-J) x Clinton	58.6	27.9	32.0	8.0	22	30.5	29.4	26.5	32.8
19	5647	Clarion	58.5	31.8	33.3	1.4	20	30.3	25.3	32.4	25.5
20	6752	Beacon x (Hawkeye x Victoria)	57.7	33.0	31.9	1.9	22	29.4	24.8	28.9	28.8
21	4372	Shelby (ck)	57.7	30.9	33.7	1.9	22	32.2	24.9	30.0	27.9
22	4134	Roxton	55.7	29.4	41.3	2.1	29	39.1	21.7	31.7	23.2
23	6642	Newton	55.5	31.9	32.2	1.1	21	31.3	25.7	32.9	30.2
24	560	Victory (ck)	55.5	28.7	37.1	2.9	30	32.6	28.2	29.0	29.9
25	5440	Waubay	55.0	32.0	32.8	3.1	21	33.2	26.2	33.1	27.7
26	5869	Clintafe	53.8	31.2	32.4	1.3	25	28.8	24.9	23.6	27.0
27	6913	(Bond - Rain. x H-J) x Land.	53.7	32.2	34.8	1.8	19	33.0	24.2	31.2	27.3
28	4327	Mohawk	53.2	31.5	32.0	.9	22	30.4	24.8	28.5	26.4
29	6765	Minland	50.9	27.4	33.9	9.3	20	28.7	25.2	29.1	26.5
30	6701	Clintonland (ck)	49.7	31.2	31.1	.9	21	29.1	23.5	29.1	25.3
31	4259	Clinton "59" (ck)	48.3	31.9	31.1	.6	21	28.0	24.4	29.3	25.0
32	3502	Tama	47.1	28.7	31.3	19.9	22	25.9	28.4	25.3	42.7

1/ Seeded April 18, 1955

2/ Seeded May 8, 1955

Table 3. Yields on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment grown in 1955.

C.I. No.	Variety or selection	Average 12 Stations	Orono Maine	Presque Isle Maine	Beltville Md.	Feeding Hills Mass. 1/	Feeding Hills Mass. 2/	Durham N. H.	New Brunswick N. J.	Stewartsville N. J.	Ithaca N. Y. 3/	Univ. Park Penn.	Burlington Vt.	Morgantown W. Va.
Bushels														
6641	Clinton x Boone-Cartier	64.7	61.1	44.6	73.6	69.3	50.7	74.9	76.0	64.2	69.3	48.1	38.3	106.0
6661	Rodney	63.8	61.4	36.3	60.2	73.6	46.5	76.9	66.1	74.4	82.5	56.0	49.7	82.4
6767	Simcoe	63.8	51.6	38.5	78.4	72.8	47.9	68.2	69.2	60.6	79.5	55.0	56.3	88.1
4157	Ajax (ck)	63.6	51.7	35.5	78.9	72.9	45.9	62.4	82.6	64.4	75.1	59.8	45.3	88.5
4521	Beaver	63.4	60.8	43.7	68.2	65.2	45.6	76.8	70.8	60.1	73.8	57.6	52.0	86.0
6938	Forward ² x Vict.-Rich.	63.2	56.9	32.3	54.9	72.9	49.6	77.1	67.8	62.2	82.4	66.0	38.5	97.2
6537	(Vict. x Haj.-Banner) x Colo	62.6	63.9	36.9	62.6	76.4	54.5	63.0	65.0	58.7	78.1	44.4	52.7	94.7
5226	Fortune	62.5	67.7	36.8	57.4	69.3	44.1	57.9	74.5	62.0	71.0	59.5	27.3	112.2
5332	Craig	61.6	61.3	38.1	62.7	81.7	45.4	73.2	66.4	56.5	72.0	57.9	37.2	97.1
6662	Improved Garry	61.6	57.3	39.5	53.7	67.5	45.8	77.4	65.7	62.7	93.9	48.2	54.0	73.5
6940	N. Y. Sel.	61.3	60.9	40.2	62.2	62.9	35.2	66.9	62.3	60.7	84.7	59.5	33.5	106.2
5441	Jackson	61.3	58.4	37.5	60.9	69.0	42.0	55.1	78.9	64.0	59.1	53.7	52.6	92.8
4970	Abegweit	61.2	60.9	32.7	45.6	73.2	42.3	66.1	68.2	62.1	81.5	53.5	57.8	91.0
4988	Mo. O-205	60.9	62.2	46.9	74.2	73.7	33.5	61.5	74.6	58.0	66.6	51.3	32.4	95.4
5946	Sauk	60.8	59.2	35.3	60.2	73.4	44.9	61.0	69.6	62.8	77.6	48.6	41.9	94.7
6939	R.L. 1273 x Spooner	59.7	66.2	36.8	64.8	62.0	45.7	72.0	68.8	57.1	68.5	59.4	29.6	85.6
6936	Land. x (Mindo x H-J) x Andrew	58.7	43.1	35.1	75.4	76.2	50.0	65.5	61.2	50.7	60.1	47.7	48.5	90.9
6935	Land. x (Mindo x H-J) x Clinton	58.6	58.1	33.4	63.9	32.6	52.1	68.0	67.8	53.7	78.6	50.6	42.2	102.6
5647	Clarion	58.5	53.9	30.9	76.2	61.2	40.1	64.7	70.7	58.8	70.8	49.0	38.1	87.5
6752	Beacon x (Hawkeye x Viot.)	57.7	50.1	32.4	70.0	68.2	46.8	58.9	72.5	52.6	71.7	52.1	38.2	79.1
4372	Shelby (ck)	57.7	61.3	26.5	55.5	68.8	52.7	62.9	72.6	56.0	64.5	45.3	42.5	83.8
4134	Roxton	55.7	46.3	34.5	45.9	62.6	44.0	59.7	52.7	66.9	69.7	44.3	39.5	67.9
6642	Newton	55.5	56.4	32.6	72.8	63.3	41.2	52.9	75.3	54.0	49.9	48.2	32.5	91.1
560	Victory (ck)	55.5	54.6	33.2	33.4	68.7	38.0	56.6	61.8	65.9	78.2	51.6	45.9	77.5
5440	Waubay	55.0	58.0	27.3	55.2	60.2	38.3	59.4	74.4	56.7	57.5	46.8	28.5	97.8
5869	Clintafe	53.8	47.0	33.1	47.4	60.8	41.0	53.0	62.4	57.7	66.3	42.4	43.4	90.8
6913	(Bond - Rain. x H-J) x Land.	53.7	51.9	35.3	82.2	56.3	45.4	55.3	70.8	41.9	53.6	41.4	34.9	75.8
4327	Mohawk	53.2	60.0	34.2	51.0	64.8	41.4	53.8	61.4	59.0	46.4	43.3	28.9	93.4
6765	Minland	50.9	47.8	33.1	57.0	55.3	41.1	46.1	63.4	46.4	58.0	48.4	31.0	83.0
6701	Clintonland	49.7	44.9	31.6	61.6	68.3	39.8	47.2	53.0	37.6	50.9	35.5	36.6	88.8
4259	Clinton "59" (ck)	48.3	52.1	31.6	57.8	65.0	37.1	51.5	58.2	43.1	41.7	40.1	14.3	86.6
3502	Tams (ck)	47.1	39.0	34.0	63.3	67.4	26.6	53.4	57.2	56.8	41.3	27.1	30.3	68.6

1/Early seeding, planted April 18, 1955.

2/Late seeding, planted May 8, 1955.

3/Average yields from 5 replicates at Ithaca and 1 at Aurora, N. Y.

Table 4. Test weights on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment grown in 1955.

C.I. No.	Variety or selection	Average 11 Stations	Orono Maine	Presque Isle Maine	Beltsville Md.	Feeding Hills Mass. 1/	Feeding Hills Mass. 2/	Durham N. H.	New Brunswick N. J.	Stewartsville N. J.	Ithaca N. Y.	Univ. Park Penn.	Morgantown W. Va.
							Pounds						
6752	Beacon x (Hawkeye x Vict.	33.0	34.5	35.5	27.5	37.0	32.5	33.0	30.0	29.0	38.0	32.9	33.5
4988	Mo. O-205	32.8	34.5	34.5	26.0	36.5	33.5	32.0	33.5	29.0	34.5	33.3	33.0
6939	R.L. 1273 x Spooner	32.6	33.5	35.5	24.0	35.0	31.0	33.0	35.0	30.0	37.5	31.2	33.0
5441	Jackson	32.3	34.5	35.0	25.0	36.0	32.0	32.0	30.0	29.0	34.0	34.4	33.0
6913	(Bond - Rain. x H-J) x Land.	32.2	34.5	33.0	29.0	36.5	31.0	30.0	29.0	27.0	38.0	32.2	34.0
5440	Waubay	32.0	34.0	34.0	24.0	34.0	34.0	30.0	31.5	30.0	37.2	31.4	31.5
6537	(Vict. x Haj.-Banner) x Cole	32.0	33.5	34.5	24.0	35.5	33.0	31.0	27.0	30.0	38.0	32.5	33.0
4259	Clinton "59" (ck)	31.9	33.5	34.0	23.0	33.5	34.5	31.0	29.0	30.0	36.7	31.7	34.0
6642	Newton	31.9	34.5	33.5	27.0	35.0	33.0	31.0	30.0	30.0	35.8	31.4	30.2
5647	Clarion	31.8	35.0	33.0	24.0	35.0	34.5	31.0	31.0	29.0	34.0	31.5	32.0
4327	Mohawk	31.5	34.0	34.5	24.5	34.5	33.0	31.0	27.0	30.0	33.5	31.2	33.5
6938	Forward ² x Vict.-Rich.	31.4	32.0	35.5	23.5	35.0	29.5	32.0	30.0	30.0	35.0	33.1	31.0
6661	Rodney	31.2	32.5	32.5	23.0	35.5	33.5	30.0	30.0	29.0	33.5	32.7	27.5
6701	Clinton	31.2	33.5	35.0	23.0	34.0	30.5	31.0	26.0	30.0	35.3	32.3	33.0
5869	Clinton	31.0	34.0	36.5	23.0	35.5	27.5	29.0	27.0	30.0	35.3	31.8	31.0
6641	Clinton x Boone-Cartier (ck)	30.9	34.5	33.0	21.0	34.0	31.0	31.0	28.0	27.0	36.0	32.6	31.5
4372	Shelby	30.9	32.0	32.5	25.0	34.0	32.0	31.0	26.0	29.0	36.5	31.1	31.0
6936	Land. x (Mind. x H-J) x Andrew	30.1	33.5	35.5	22.0	33.5	31.5	28.0	29.0	25.0	34.2	30.0	28.5
5332	Craig	30.0	32.0	34.0	20.5	35.0	28.0	29.0	29.0	29.0	32.3	32.6	29.0
6767	Simcoe	29.9	33.0	35.0	23.5	34.0	29.5	27.0	29.0	25.0	31.5	31.4	30.0
6940	N. Y. Sel.	29.6	32.5	33.0	21.0	33.0	29.0	30.0	28.0	25.0	32.0	31.8	30.5
4521	Beaver	29.4	33.0	34.0	21.0	32.0	33.0	27.0	27.0	25.0	28.6	29.9	32.0
4134	Roxton	29.1	31.0	35.0	19.0	33.0	28.0	30.0	26.0	26.0	33.5	29.0	30.0
6662	Improved Garry (ck)	29.1	30.5	32.0	22.5	34.0	27.0	29.0	25.0	24.0	33.2	32.4	30.0
4157	Ajax	28.9	32.5	33.5	19.5	35.0	28.0	27.0	27.0	27.0	30.2	31.0	27.5
5946	Sauk	28.9	32.0	34.5	19.0	33.5	28.0	28.0	28.0	25.0	28.3	31.8	29.5
5226	Fortune	28.7	32.5	36.0	17.0	32.0	30.0	27.0	26.5	25.0	31.5	31.2	27.5
560	Victory (ck)	28.7	28.5	30.0	25.0	33.5	23.0	31.0	27.0	27.0	31.8	29.4	29.0
3502	Tama (ck)	27.9	29.0	32.5	21.5	33.0	25.0	24.0	25.0	25.0	34.3	29.9	28.0
6935	Land. x (Mind. x H-J) x Clinton	27.6	31.5	33.0	17.5	32.0	29.0	27.0	26.0	23.0	28.5	29.3	27.0
4970	Abegweit	27.4	30.0	28.5	21.5	31.0	27.0	25.0	25.0	24.0	34.0	27.7	28.0
6765	Minland												

1/Early seeding.

2/Late seeding.

Table 5. Plant height on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment grown in 1955.

C.I. No.	Variety or selection	Average Stations 9	Orono Maine	Presque Isle Maine	Beltsville Md.	Feeding Hills Mass.		Durham N. H.	New Brunswick N. J.	Stewartsville N. J.	Univ. Park Penn.
						1/ Mass.	2/ Mass.				
5332	Craig	30.0	33	24	36	31	25	40	32	22	27
4259	Clinton "59" (ck)	31.1	35	28	37	33	26	37	34	23	27
6701	Clintonland	31.1	34	29	35	33	27	38	31	24	29
3502	Tama (ck)	31.3	35	27	35	32	25	37	35	25	31
6752	Beacon x (Hawkeye x Vict.)	31.9	32	28	36	33	30	39	34	26	29
6935	Land. x (Mindo x H-J) x Clinton	32.0	37	26	37	33	30	39	34	25	27
4327	Mohawk	32.0	37	28	35	33	27	39	35	26	28
6642	Newton	32.2	36	30	36	33	30	38	35	24	28
5869	Clintafe	32.4	37	30	36	33	29	39	36	25	27
5440	Waubay	32.8	38	27	37	33	27	40	36	27	30
6537	(Vict. x Haj.-Banner) x Colo	33.0	38	29	37	34	29	39	37	24	30
6936	Land. x (Mindo x H-J) x Andrew	33.1	37	29	35	36	32	40	36	27	26
5647	Clarion	33.3	36	29	39	34	27	41	38	26	30
4372	Shelby (ck)	33.8	40	29	38	35	31	42	35	25	29
6765	Minland	33.9	39	28	38	36	31	40	36	26	31
4970	Abegweit	33.9	37	28	37	38	29	42	36	27	31
5441	Jackson	34.0	37	28	38	35	27	43	40	28	30
5946	Sauk	34.0	36	28	39	36	31	41	37	29	29
6641	Clinton x Boone-Cartier	34.1	39	31	37	35	30	40	38	26	31
6940	N. Y. Sel.	34.6	38	29	38	37	29	44	38	28	30
4988	Mo. O-205	34.6	40	29	39	36	28	43	39	29	28
6913	(Bond - Rain. x H-J) x Land.	34.8	40	29	38	35	33	41	38	27	32
6662	Improved Garry	35.3	37	31	38	36	33	43	39	30	31
6661	Rodney ² x Vict.-Rich. (ck)	35.4	39	30	37	36	31	46	40	31	29
6938	Forward ² x Vict.-Rich. (ck)	35.9	41	30	37	38	31	45	40	28	32
4157	Ajax	36.3	38	30	38	39	34	44	40	28	36
6767	Simcoe	36.4	39	31	39	38	34	43	41	30	33
4521	Beaver	36.6	41	32	39	36	34	46	40	30	31
5226	Fortune	36.9	42	29	40	41	30	42	41	33	34
6939	R.L. 1273 x Spooner	36.9	45	33	41	38	32	42	40	28	33
560	Victory (ck)	37.1	44	32	39	40	28	44	40	32	35
4134	Roxton	41.3	44	38	42	43	34	49	46	36	40

1/Early seeding.

2/Late seeding.

Table 6. Percent of lodging of varieties and selections included in the Uniform Northeastern States Oat Experiment grown in 1955.

Table 6A.
Forage Yields

C.I. No.	Variety or selection	Average 7 Stations	Orono Maine	Presque Isle Maine	Beltsville Md.	Feeding Hills Mass. 1/	Durham N. H.	New Brunswick N. J.	Univ. Park Penn.	Durham N. H.
Percent										Tons
6701	Clintland	0.9	3	0	0	0	1	0	2	1.43
6662	Improved Garry	0.9	3	1	0	0	1	0	1	2.45
6642	Newton	1.1	2	4	0	0	2	0	0	2.01
4259	Clinton "59" (ck)	1.9	0	0	0	0	2	10	1	1.38
5647	Clarion	2.7	5	0	0	0	2	10	2	2.36
6752	Beacon x (Hawkeye x Vict.)	3.1	3	4	0	0	3	10	2	2.23
4327	Mohawk	3.4	0	0	0	0	3	20	1	1.96
5869	Clintafe	3.9	2	0	0	0	3	20	2	2.01
5440	Waubay	4.4	3	0	13	0	3	10	2	2.00
6913	(Bond - Rain. x H-J) x Land.	5.4	2	2	0	0	1	30	3	2.03
6940	N. Y. Sel.	5.4	3	0	0	0	2	30	3	3.12
4372	Shelby (ck)	5.7	6	0	0	0	3	30	1	2.52
560	Victory (ck)	6.7	8	0	0	0	6	30	3	2.66
4521	Beaver	7.7	13	1	0	0	3	30	7	2.90
5332	Craig	8.1	15	3	0	0	1	30	8	2.71
5946	Sauk	8.3	6	2	15	1	3	30	1	2.27
4134	Roxton	8.6	5	0	0	0	4	50	1	2.81
6537	(Vict. x Haj.-Banner) x Colo	9.4	28	1	0	0	3	20	14	2.27
6767	Simcoe	9.6	23	1	10	0	2	30	1	2.52
6661	Rodney	10.4	23	0	0	0	3	40	7	3.10
6765	Minland	10.6	8	13	25	0	2	10	16	1.79
5441	Jackson	10.9	10	1	0	0	4	60	1	2.08
6935	Land. x (Mindo x H-J) x Clinton	11.9	34	4	0	0	3	30	12	2.71
4157	Ajax (ck)	12.6	16	6	10	0	2	50	4	2.20
6641	Clinton x Boone-Cartier	12.7	56	5	0	0	3	20	5	2.76
4970	Abegweit	13.0	5	0	30	0	1	50	5	2.66
4988	Mo. O-205	16.1	45	4	0	0	2	30	14	2.30
6938	Forward ² x Vict.-Rich.	16.1	33	1	18	0	3	40	18	3.41
6936	Land. x (Mindo x H-J) x Andrew	16.7	50	27	0	0	3	30	7	2.37
6939	R.L. 1273 x Spooner	18.7	46	1	0	0	4	40	4	2.88
5226	Fortune	20.7	33	1	42	0	3	40	26	2.08
3502	Tama (ck)	26.3	15	16	0	0	3	50	100	1.94

1/ Late seeding record. No lodging in any entry when seeded early.

No lodging occurred at Stewartsville, N. J.

Table 7. Date of heading and ripening on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment grown in 1955.

C.I. No.	Variety or selection	Date Headed										Date Ripe				
		Average Stations 9	Orono Maine	Presque Isle Maine	Belfastville Md.	Feeding Hills Mass. 1/	Feeding Hills Mass. 2/	Durham N. H.	New Brunswick N. J.	Stewartsville N. J.	Univ. Park Penn.	Morgantown W. Va. 3/	Average 3 Stations	Feeding Hills Mass. 1/	Feeding Hills Mass. 2/	Durham N. H.
6537	(Vict. x Haj.-Banner) x Colo	6/19	7/8	7/9	6/6	6/9	6/14	6/25	6/27	6/4	6/6	6/8	6/9	7/12	7/21	7/25
6936	Land. x (Mindo x H-J) x Andrew	19	8	9	8	8	14	25	25	25	7	9	6	10	19	23
6913	(Bond - Rain. x H-J) x Land.	19	6	17	3	8	14	25	26	4	4	8	6	12	21	23
5647	Clarion	20	9	10	8	8	16	25	27	7	7	11	8	13	21	23
4988	Mo. O-205	20	8	8	8	8	18	26	26	5	9	8	9	11	19	26
6765	Minland	20	8	9	15	8	15	25	25	3	6	6	6	13	22	24
5440	Waubay	21	10	13	8	8	17	26	27	7	8	10	11	13	20	25
4259	Clinton "59" (ck)	21	9	10	8	8	18	25	27	8	9	11	8	13	19	25
6701	Clintonland	21	9	10	8	8	18	25	25	7	9	11	8	13	19	26
6642	Newton	21	9	12	7	7	18	26	27	5	8	11	7	13	22	23
5441	Jackson	22	10	11	8	8	18	27	28	9	10	14	10	12	21	24
3502	Tama (ck)	22	12	10	8	8	18	29	28	8	10	13	9	13	19	26
4327	Mohawk	22	10	12	12	12	18	26	28	9	8	13	9	13	20	24
6939	R.L. 1273 x Spooner	22	12	13	8	8	19	29	29	7	9	11	8	16	23	26
4372	Shelby (ck)	22	11	13	3	3	19	29	30	8	10	13	7	15	24	26
6935	Land. x (Mindo x H-J) x Clinton	22	12	13	12	12	18	26	25	8	10	14	8	14	19	23
6752	Beacon x (Hawkeye x Vict.)	22	11	13	8	8	19	28	28	7	9	12	8	13	21	26
4521	Beaver	24	13	15	12	12	20	7/1	29	9	10	12	8	14	24	26
6662	Improved Garry (ck)	24	13	15	10	10	20	6/30	30	10	10	14	10	14	24	27
4157	Ajax	24	12	13	13	13	21	7/1	29	10	10	16	11	14	23	26
6767	Simcoe	24	11	13	10	10	21	1	30	10	11	15	10	16	23	26
6641	Clinton x Boone-Cartier	24	14	16	10	23	23	1	30	8	10	14	11	17	25	26
5946	Sauk	25	15	16	12	21	21	6/30	30	11	11	14	12	16	24	26
5869	Clintafe	25	13	16	15	19	21	28	7/1	12	12	16	11	14	21	26
5226	Fortune	26	16	16	15	22	22	7/2	1	12	12	17	23	16	24	27
4970	Abegweit	26	14	15	15	23	23	3	6/30	11	11	16	24	19	26	27
6940	N. Y. Sel.	26	15	16	13	23	23	4	7/1	12	11	17	24	17	26	27
5332	Craig	26	19	18	13	21	21	1	6/30	10	10	14	21	15	23	24
6938	Forward ² x Vict.-Rich.	26	13	16	10	24	24	4	7/2	12	11	17	23	18	25	26
6661	Rodney	27	15	16	15	22	22	3	3	19	11	17	24	18	26	27
4134	Roxton	29	17	19	20	26	26	5	5	15	10	21	27	23	29	29
560	Victory (ck)	30	18	21	20	26	26	6	5	14	11	21	27	23	29	29

1/Early seeding.

2/Late seeding.

3/Data incomplete; not included in average.

Table 8. Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment in 1955.

C.I. No.	Variety or selection	Crown rust		Stem rust			Smut			Septoria	H. avenae	Red leaf		
		Md. 1/ Beltsville	Durham N. H.	Reac.	Reao.	Md. 2/ Beltsville	Durham N. H.	Itasca N. Y.	Feeding Hills (Early)				Feeding Hills (Late)	Durham N. H.
4521	Beaver	S	15	MS	5	6	0	T	0	0	20	%		
6661	Rodney	S	10	S	5	5	0	0	0	1	15	15		
4134	Roxton	S	25	S	20	40	0	0	0	5	11	11		
6662	Improved Garry (ck)	S	5	S	1	10	0	0	0	0	15	15		
4157	Ajax	S	20	S	15	15	5	3.0	0	0	30	30		
6767	Simcoe	S	10	S	15	8	0	1.3	0	0	20	20		
5946	Sauk	S	15	S	15	5	0	T	0	0	36	36		
5226	Fortune	S	15	S	10	25	0	0	0	0	18	18		
4970	Abegweit	Seg	15	S	10	5	0	1.0	0	0	13	13		
6940	N. Y. Sel.	Seg	10	S	5	35	0	0	0	0	23	23		
5332	Craig	S	10	S	10	50	0	0	0	0	13	13		
5647	Clarion	S	15	S	10	10	0	0	0	0	40	40		
5441	Jackson	S	15	S	10	5	0	0	0	0	23	23		
5440	Waubay	S	20	S	15	10	0	T	0	10	40	40		
560	Victory (ck)	S	25	S	15	85	0	T	0	0	10	10		
4259	Clinton "59" (ck)	S	15	S	10	50	0	0	0	0	26	26		
3502	Tana	R	10	S	5	45	0	0	0	0	50	50		
6701	Clintonland	R	15	S	10	85	0	0	0	0	23	23		
5869	Clintonafe	S	10	S	5	85	0	T	0	0	13	13		
4988	Mo. O-205	S	15	S	15	50	0	0	0	0	60	60		
4327	Mohawk	S	15	S	10	30	0	0	0	0	20	20		
6939	R.L. 1273 x Spooner	S	5	S	1	5	0	0	0	0	36	36		
6537	(Vict. x Ha.j.-Banner) x Colo	S	5	S	2	15	0	0	0	0	10	10		
6641	Clinton x Boone-Cartier	S	10	S	5	35	0	0	0	0	26	26		
6642	Newton	S	10	S	2	55	0	0	0	0	36	36		
6938	Forward ² x Vict.-Rich.	S	20	S	10	60	0	0	0	0	10	10		
6765	Minland	S	5	S	1	10	0	0	0	0	36	36		
4372	Shelby (ck)	R	10	S	5	25	0	T	0	0	30	30		
6935	Land. x (Mindo x H-J) x Clinton	R	10	S	2	T	0	0	0	0	23	23		
6936	Land. x (Mindo x H-J) x Andrew	R	10	S	2	T	0	0	0	0	53	53		
6752	Beacon x (Hawkeye x Vict.)	Seg	15	S	5	15	0	0	0	0	26	26		
6913	(Bond-Rain. x H-J) x Land.	R	10	R	1	T	0	0	0	0	70	70		

1/ Readings from nursery inoculated with crown rust races 203 and 258.

2/ Readings from nursery inoculated with Races 7A and 8.

NORTH CENTRAL REGION

Record oat yields and total production were obtained in the North Central Region and in the United States in 1955. Although the acreage seeded to oats for all purposes in the United States was 47,634,000 acres, the largest on record, the acres actually harvested for grain in the United States and in the North Central Region were 10 and 13 percent, respectively, below the previous highs, recorded in 1921 and 1925, respectively. About 7 million acres or 15 percent of the 1955 U. S. oat acreage was not harvested for grain, being used for pasture, hay, silage, other uses, or abandoned. This compares with a total of about 5 million acres or 11 percent of the 1954 crop.

The North Central record production of 1,282,196,000 bushels of oats on 31,304,000 acres in 1955, with a record average yield of 41.0 bushels per acre, was obtained despite appreciable drought damage in Kansas, Nebraska, North and South Dakota, and western Iowa, and estimated losses from stem rust of 3, 3, 5, 6 and 10 percent in Iowa, Wisconsin, Kansas, South Dakota, and North Dakota, respectively. The estimated loss of 5 percent from both stem and crown rust in Iowa in 1955 was the lowest since 1948 and compares with estimated losses of 40 and 20 percent in 1953 and 1954, respectively.

Record acre yields were produced in Illinois (56), Indiana (52), Ohio (52), and Michigan (46), with near record yields in Wisconsin, Missouri and Iowa. The only previous season approaching these record oat yields was 1945 when Wisconsin, Minnesota and South Dakota produced record yields. Although the 1955 season was unusually favorable for oats in the eight eastern states of the region, drought and stem rust caused appreciable losses in the western tier of states. The 1955 yields in Kansas, Nebraska, North Dakota and South Dakota, ranged from 11.5 to 15.0 bushels, respectively, below the record yields for those states.

The North Central Region produced 81.4 percent of the U. S. oat crop in 1955, compared with 82.0 percent for the ten-year period 1946-55. North Central oat production during the last ten years has ranged from 77.5 percent of the U. S. production in 1953 to 85.8 percent in 1948. Iowa, Minnesota and Illinois were responsible for about half of the North Central oats production during this ten year period. They, together with Wisconsin and South Dakota, have accounted for about 70 percent of the North Central oat production. The "Big Four," Iowa, Minnesota, Illinois and Wisconsin, produced 50 percent of the Nation's oat crop during the last ten years, and about 49 percent during the last five years.

Uniform North Central States Oat Nursery

The Uniform North Central States Oat Nursery was seeded on 18 stations in the region, in 1955, as follows:

Ill.	- DeKalb	Nebr.	- Lincoln
	Urbana	N. Dak.	- Dickinson
Ind.	- Lafayette		Fargo
Iowa	- Ames		Langdon
Kansas	- Manhattan		Minot
	Powhattan	Ohio	- Columbus
Mich.	- East Lansing		Wooster
Minn.	- St. Paul	S. Dak.	- Brookings
Mo.	- Columbia	Wisc.	- Madison

The C.I. Number, variety or cross, selection number and state nominating each of the 40 entries included in the 1955 Uniform North Central States Oat Nursery are given in Table 9. Twelve of the entries were new in 1955 and four were check varieties. A summary of the performance of the 40 entries at all stations where data were recorded in 1955 is presented in Table 10. Detailed agronomic and pathologic data for each station are presented in Tables 11 to 25, inclusive.

The parentage for C.I. No's. 5864, 6537 and 6608 has been erroneously recorded in the past as Clinton x Landhafer (C.I. No. 5864), and Clinton x Ukraine (C.I. No's. 6537 and 6608). In a recent thorough search of the history and pedigree of these three selections at the Iowa Station, it was revealed that the correct parentage of all three is (Victoria x Hajira-Banner) x Colo. The error occurred several years ago when single rod row and headrow nursery numbers were inadvertently given duplicate numbers.

Beacon x (Hawkeye-Victoria), C.I. No. 6752; Benton⁷ x Landhafer, C.I. No. 6930; Nemaha x (Clinton x Boone-Cartier), C.I. No. 6642; Sac x (Hajira-Joanette), C.I. No. 5927; and Vicland x (Branch x Clinton²-Santa Fe), C.I. No. 6916; were named Beedee, Bentland, Newton, Ransom and Fayette, respectively, during 1955. They have been approved for distribution by the nominating states shown in Table 9.

Yield

Table 11 includes yield data received from 17 of the 18 stations where the Uniform North Central States Nursery was grown in 1955. The yields recorded at Langdon, North Dakota, were not included because of uneven bird damage to entries of different maturities and test weights. Average yields from the region were unusually high in 1955, ranging from 72 to 91 bushels per acre, compared with 48 to 69 and 61 to 77 in 1953 and 1954, respectively. Only 10 of the 40 entries had average yields below 80 bushels. The five highest yielding entries were C.I. No's. 5961, 5962, 7083, 6935, and Simcoe. The first three and five of the ten highest yielding entries were new in 1955. C.I. No. 6537, the highest yielding entry in 1954, was in sixth place in 1955. C.I. No. 6935 was in fourth place for average yield in both 1954 and 1955. Simcoe, Sauk and Mo. 0-205 were among the ten highest yielding and the highest of the named varieties. Sauk ranked fifth and seventh in average yield in 1954 and 1955, respectively. The 15 highest yielding entries were resistant to race 7 of stem rust.

Yield of Groats

Using a centrifugal, impact dehuller supplied by the Quaker Oats Company, groat percentage determinations were made at Ames, Iowa, for all entries at one station in each of the 12 North Central States. The calculated yields in bushels of groats per acre, for each of these stations, using the groat percentage values, are presented in Table 12. The five highest yielding entries in bushels of groats per acre were among the six highest yielding listed in Table 11. In general, the entries tended to maintain about the same rank whether yield was expressed in bushels of grain or groats. Minland, C.I. No. 6913, Andrew, Clarion, C.I. No. 6933 and C.I. No. 7117 gained from 9 to 5 places, while C.I. No's. 6935, 6668, 6939 and 5864, Beedee and Jackson lost from 16 to 5 places in rank, when yield was expressed in yield of groats instead of yield of grain.

Groat Percentage

The percentage of groats for all entries at one station in each of the 12 North Central States, and under irrigation at Aberdeen, Idaho, are presented in Table 13. Groat percentages were determined by mechanically dehulling three 25 gram samples of each entry, using the centrifugal, impact dehuller. The groat percentages determined by mechanical dehulling were compared with the results from hand dehulling. In general, high groat percentages tended to be slightly higher when determined mechanically than by hand dehulling, and low groat percentages tended to be lower when determined mechanically than by hand dehulling. It did not appear feasible to adjust the mechanical determinations to the results obtained from the relatively few and much more laborious hand determinations.

Minland, Logan, Andrew, and C.I. 6928 were the four highest entries for average groat percentages. These same entries were among the highest for groat percentages in 1954 (based on data from two locations). The range in average groat percentage was from 75.4 percent for Minland to 71.0 percent for C.I. No. 6935, a related selection. Minland has been consistently low in test weight and high in groat percentage. In 1955 it ranked first for groat percentage and last for test weight among all entries. Some of the exceptionally low groat percentages (Newton, Sauk, Fayette, C.I. No. 6668 and C.I. No. 6935 at Lafayette, Indiana, for example) obviously were due to unusually low test weights (Table 14) resulting from disease damage, etc. Since oats grown under irrigation at Aberdeen, Idaho, are relatively free from diseases, and usually develop normally, the groat percentage data from Aberdeen, are included in Table 14, for purposes of comparison, but are not included in the averages presented. The correlation between average yield and average percent groats was -.104.

Test Weight

Data on test weight from all 18 stations are presented in Table 14. The average test weights ranged from 35.7 pounds for C.I. No. 6933 to 29.7 pounds for Minland. The four entries having highest test weights in both 1955 and 1954 (and in the same order) were C.I. No's. 6933, 6934, 6537 and 6913. The next two highest, C.I. No's. 6608 and 7084, were new in 1955. Mo. O-205, Jackson, Beedee, Clintland, Clarion and Newton were the highest in test weight among the named varieties, whereas Minland, Gopher and Sauk were the lowest. Minland was the lowest in test weight and highest in groat percentages of all entries. C.I. No. 6934, in contrast, was next to the highest for test weight and third from the lowest in groat percentage. C.I. No. 6935 was the lowest in groat percentage and third from the lowest in test weight, but fourth in yield. C.I. No. 6913, C.I. No. 7084, Mo. O-205, Jackson and C.I. No. 7117 ranked relatively high for both test weight and groat percentage. The correlation between average yield and average test weight was +.027, while between average percent groats and average test weight the correlation was +.047.

Height

The plant heights recorded on 13 stations are presented in Table 15. The stations at DeKalb, Illinois, Lafayette, Indiana, Fargo, North Dakota, Wooster, Ohio, and Madison, Wisconsin, did not report heights. The range in average height was 33 to 42 inches in 1955, compared with 30 to 37 and 31 to 38 in 1953 and 1954, respectively. The taller oats in 1954 and 1955 reflected the successively more favorable seasons and higher average yields. The correlation between heights and average yields (for all reporting stations) in 1955 was +.498. Fayette was the shortest entry and Simcoe the tallest.

Lodging

The percent of lodging reported at 14 stations and the straw strength measurements at 2 stations are presented in Table 16. Extremely heavy and general lodging, or storm damage, was recorded at Lafayette, Indiana, St. Paul, Minnesota, and Madison, Wisconsin. The best differential lodging was observed at Powhattan, Kansas, East Lansing, Michigan, Wooster, Ohio, and Brookings, South Dakota. Waubay, C.I. No. 6933, C.I. No. 5962, Clarion, C.I. No. 5961 and C.I. No. 7116 were the top six entries for average standing ability. The ten best entries for combined standing ability and yield were C.I. No's. 5962, 5961, 6933 and 7116, Mo. O-205, Simcoe, Clarion, Waubay, C.I. No. 6913 and Clintland. Some of the high yielding entries, such as C.I. No's. 7983, 6935, 6537, 6608, and 7084, and Sauk, had relatively high lodging percents.

Date Headed

Date of heading was reported by all stations except DeKalb, Illinois, Powhattan, Kansas, and Columbus and Wooster, Ohio. There was a range of 9 days in average heading dates, with C.I. No. 6927 the earliest and Sauk the latest. Other early heading entries were Minland, C.I. No. 6878, Andrew, Ransom, and C.I. No. 6913. There was no evidence of a correlation between date of heading and yield. The six highest and the six lowest yielding entries had ranges of 5 and 8 days, respectively, in average heading.

Date Ripe

Only 6 of the 18 stations reported date of ripening. There was a range of 5 days in average ripening compared with one of 9 days in heading, with C.I. No. 6927 again the earliest and Sauk the latest. Minland was among the earliest for heading and among the latest for ripening. The average number of days from heading to ripening of Sauk and Minland, at the six stations reporting both dates, was 30.5 and 38.7 days, respectively. The correlation coefficient between average yield and average days to maturity was +.639. The lower yield of the early ripening entries probably resulted in part, at least, from premature ripening resulting from stem rust infection on the stations reporting date ripe.

Reaction to Stem Rust

The stem rust reading recorded at six stations under conditions of natural infection, with no artificial inoculation, are presented in Table 19. The five most resistant entries, with average infection coefficients below 1 percent, were C.I. No's. 6878, 6936, 5864 and 7020, and Ransom. The five most susceptible entries were C.I. No. 6928, C.I. No. 6927, Bentland, Clinton 59 and Clintland. The 13 entries listed first in Table 19 were resistant to races 7 and 8, and the last 7 entries were susceptible to race 7. These data would indicate race 7 was the most prevalent race at Lincoln, Nebraska, Dickinson and Minot, North Dakota and Brookings, South Dakota, whereas both races 7 and 8 were prevalent at St. Paul, Minnesota and Fargo, North Dakota.

Data on the seedling reaction in the greenhouse to races 6, 7, 7A and 8, and the adult reaction in the field to races 7, 7A and 8, are presented in Table 20. The seedling reactions at St. Paul were determined at 75° and 85° F., in order to detect the presence of the A and/or D genes in combination with BC. The probable genotype of each entry is indicated in Table 20. C.I. No's. 6936 and 6878 apparently possess the ABCD genes, although C.I. No. 6878 appeared to be slightly heterozygous for the D gene. Ransom and C.I. No's. 6913, 7030, 5962 and 5961 apparently possess the ABC genes, although C.I. No. 5961 was heterozygous for BC.

Ransom and C.I. No's. 6936, 6879, 5962, 6913 and 7030, with ABC, ABCD, ABCD, ABC, ABC and ABC genotypes, respectively, were outstanding for adult resistance to races 7, 7A and 8, with average infection coefficients of 1.8, 1.9, 2.0, 3.4, 3.9 and 4.4 percent, respectively. These data, and numerous field observations indicate the ABC genes afford adequate adult resistance under field conditions to known races of stem rust. The addition of the D gene should represent insurance against the possible discovery of a race "8A", or some other virulent biotype or race not yet identified.

Reaction to Crown Rust

Seedling reactions to specific races of crown rust were not obtained in 1955. Data on the adult reactions recorded at nine stations under conditions of natural infection with no artificial inoculation are presented in Table 21. The five most resistant entries were C.I. No. 7084, C.I. No. 6936, Clintland, C.I. No. 7083 and Fayette with average infection coefficients of 0.6, 1.0, 1.0, 1.4, and 2.1 percent, respectively. Except for Fayette, which has the Santa Fe type of resistance, the first ten entries in Table 21 possess the Landhafer type of resistance. They were outstanding for resistance having average infection coefficients below 4 percent. C.I. No. 7116, which apparently inherits its resistance from Marion, had a low average infection coefficient of 5.8 percent. Clintland, Fayette, Bentland and Minland were outstanding for resistance among the named varieties, while Gopher, Jackson, Clinton 59, Clarion, Waubay, Logan, Andrew and Mo. O-205 were the most susceptible.

Reaction to Smut

Data on the percent of smut infection recorded on 37 entries in the North Central States Oat Smut Nursery grown on 10 stations are presented in Table 22. New entries in the North Central States Oat Yield Nursery are included each year in the smut nursery. Data on the average smut infection for each entry in the 1955 yield nursery, taken from the most recent year it was grown in the smut nursery, are presented in the last column of summary Table 10.

C.I. No's. 6939, 6935, 7083, and 7084 were outstanding for smut resistance in 1955 with average infection percentages of 0, T-, T-, and T-, respectively. Seventeen additional entries in the 1955, North Central Yield Nursery had average infection percentages of less than 1 percent. The only highly susceptible entries were Gopher, Ransom and Simcoe.

Data on the reactions of Minland, Beedee, Newton, Bentland, C.I. No's. 6939, 6537, 5967 and 6908, and Saia, to 15 races of loose smut and 7 races of covered smut at Pullman, Washington, are presented in Table 23. Minland, Bentland and C.I. No. 6537 were resistant to all races, although each showed a light infection by a different single race. C.I. No. 6939 was lightly infected with two races of loose smut and moderately infected by one race of covered smut. Beedee and Newton were each highly susceptible to two races of loose smut and by one race of covered smut.

C.I. No. 5967, a selection well adapted to the North Central Region, Saia and C.I. No. 6908 were apparently immune to all races of loose and covered smut. Saia (*Avena strigosa*) is being used as a source of rust and smut resistance in a number of interspecific hybridization programs.

Reaction to Septoria

Data on the degree of infection by *Septoria avena* under various conditions of natural and artificial inoculation at Ames, Iowa, Madison, Wisconsin, DeKalb, Illinois, and East Lansing, Michigan, are presented in Table 24. Clintland, C.I. No. 6935, Clinton 59, Gopher and Simcoe were the lowest in average percent of leaf and stem infection at Madison and Ames, whereas Logan was the highest. The correlation between leaf and stem infection from spray inoculations at Madison was +0.499, whereas the correlations between stem and kernel infection from hypodermic inoculations was +0.351. C.I. No's. 6935 and 6936 were outstanding for resistance to combined leaf and stem infection at East Lansing.

Reaction to Red Leaf

Several cases of the spread of yellow dwarf (red leaf) from barley to oats were observed in the North Central Region in 1955. There is evidence of an increase in prevalence and severity of this disease in recent years. Damage from red leaf has been light since the heavy losses experienced throughout the region in 1949.

The relative susceptibility and resistance of the entries in the North Central Nursery to artificially induced infestation with two isolates of red leaf at Urbana, Illinois, and to natural infection at East Lansing, Michigan, are presented in Table 25. Plants were artificially infested in the 2-3 leaf stage with viruliferous apple-grain aphid, *Rhopalosiphum prunifoliae*. The percentage reduction in number of kernels, weight of kernels, and height of plant, resulting from red leaf infection was very striking. Reduction in number of kernels ranged from 26.0 to 84.7 percent; in kernel weight from 3.2 to 58.3 percent; and in height of plant from 15.5 to 49.3 percent. C.I. No. 6644 was relatively resistant to isolate No. 1, and C.I. No. 6913 was resistant to isolate No. 2. None of the entries was resistant to both isolates, or even highly resistant to either isolate. It is evident better sources of resistance to red leaf are urgently needed.

Summary

Period of years summary tables for the Uniform North Central States Nursery for 1953-55, inclusive, are available on request, and will be included in the 1956 report. Sixteen of the 1955 entries have been included only for the last two years, and 12 were new in 1955. Except for C.I. No's. 5966 and 6644, all of the entries included for three years have been named and distributed. (C.I. No. 6537 was named Burnett and approved for distribution since Tables 9 to 25, inclusive, were prepared). The recently named varieties Bentland, Fayette, Logan and Ransom were grown in the nursery only in 1954 and 1955. None of the entries new in 1955 has been named.

Sauk, C.I. 6537, Simcoe and Mo. O-205 have been outstanding for average yield, among entries grown for three years, whereas C.I. No. 6935 was high among the two-year entries, and C.I. No's. 5961, 5962 and 7083 were high among the entries new in 1955. On the basis of adjusted comparable yields for the three-year period, C.I. No's. 5961, 5962, 6935 and 7083, and Sauk and Burnett, were the highest in yield; whereas C.I. No. 6927 and Clinton 59, Bentland, Fayette, Ransom and Gopher were the lowest.

C.I. No. 6933 has been outstanding for high test weight. The five entries highest for adjusted comparable test weights were C.I. No's. 6933, 6934, 6537, 6913 and 6608; whereas Gopher, Minland, C.I. No. 6935, Waubay, and Sauk were the lowest. C.I. No. 6933 also has been the stiffest strawed entry, on the basis of adjusted lodging percentages. Other entries low in lodging were Newton, C.I. No. 5962, Logan, Clintland and Minland. The weakest strawed entries have been Gopher and C.I. No's. 6668, 6935, 6936, 6878 and 7083.

Fayette and C.I. No. 5962 have been the shortest and tallest strawed, respectively, among the 1955 entries; whereas C.I. No. 6927 and Sauk have been the earliest and latest, respectively, in date heading.

On the basis of adjusted values, for the years they have been tested, C.I. No. 6537 (Burnett) and C.I. No. 6933 have been outstanding for combined high yield, high test weight, and stiff straw.

Table 9. Information on entries included in the Uniform North Central States Oat Nursery in 1955.

C.I. No.	Variety or cross	Selection No.	Entered by
4170	Andrew (ck)	Minn. II-33-21	Check
5966	Andrew x Clinton	489408	Nebraska
6752	Beedee	X436-2	Wisconsin
6930	Bentland	5129	Indiana
6928	Benton x Marion	47-99	Illinois
6913	(Bond-Rainbow x Haj-Joan) x Landhafer	II-47-25	Minnesota
6927	(Boone-Cartier) x Clinton	424A1-71-59	Indiana
5647	Clarion	Abd. 194-3001	Iowa
6701	Clintland	B4916A3-4	Indiana
4259	Clinton 59 (ck)	Ind. 1335-3-10	Check
6644	Clinton ² x Ark. 674	461A1-3-41-2	Indiana
6668	Clinton x (Boone-Cartier)	422A1-48-2-2-34	Indiana
6933	Clinton x (Boone-Cartier)	422A1-59-1-6	Indiana
7030	Clin x [Victory x (Victoria x H-Banner)]	521466	Nebraska
7020	Clin x [Victory x (Victoria x H-Banner)]	521710	Nebraska
7117	D69-Bond x (Victoria-Rich x Bannock)	50-643	Iowa
6916	Fayette	X486-4	Wisconsin
2027	Gopher (ck)	Minn. 674	Check
5441	Jackson	Abd. 196-3006	Michigan
6878	[Landhafer x (Mindo x H-J)] x Andrew	II-50-46	Minnesota
7083	[Landhafer x (Mindo x H-J)] x Andrew	II-50-77	Minnesota
7084	[Landhafer x (Mindo x H-J)] x Andrew	II-50-82	Minnesota
6936	[Landhafer x (Mindo x H-J)] x Andrew	II-50-51	Minnesota
6935	[Landhafer x (Mindo x H-J)] x Clinton	II-50-12	Minnesota
6929	Logan	47-108	Illinois
7116	Marion x D69-Bond	52-336-3-1-1	Iowa
6765	Minland	II-46-3	Minnesota
4988	Mo. O-205	04205	Missouri
6934	Nemaha x (Clinton x Boone-Cartier)	436A1-16-6	Indiana
6642	Newton	436A2-2-4-1	Indiana
5927	Ransom	Ia. 94-78-8-1	North Dakota
5961	[Rox x (Vic x H-B)] x [Aj x (Vic x H-B)]	Ottawa 3928-5-7	Iowa
5962	[Rox x (Vic x H-B)] x [Aj x (Vic x H-B)]	Ottawa 3928-5-8	Indiana
5946	Sauk	X345-1	Wisconsin
6767	Simcoe (ck)	C.A.N. 742	Check
5864	(Victoria x Hajira-Banner) x Colo	49-2357	Iowa
6537	(Victoria x Hajira-Banner) x Colo	49-2166	Iowa
6608	(Victoria x Hajira-Banner) x Colo	49-2169	Iowa
6939	(Victoria x Hajira-Banner) x Spooner	X342-1-1	Wisconsin
5440	Waubay	Abd. 173-2850	South Dakota

Table 10. Average of agronomic and pathologic data obtained from stations reporting on Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Yield	Yield groats	Percent groats	Test weight	Height	Lodging	Date head	Date ripe	Crown rust	Stem rust	Smut
		^{1/}										^{2/}
		(17)	(12)	(12)	(18)	(13)	(14)	(14)	(6)	(8)	(4)	(10)
		Bu.	Bu.	%	Lbs.	In.	%	June	July	%	%	%
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	91.1	70.9	74.0	32.9	39	29	13	17	10.5	7.1	0.1
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	91.0	71.7	73.3	32.5	41	26	13	18	13.6	1.6	0.2
7083	[Landh x (M x H-J)] x And	89.5	67.8	72.9	33.1	37	46	10	16	1.4	1.4	T
6935	[Landh x (M x H-J)] x Cl	89.4	65.0	71.0	30.9	36	40	15	18	2.8	2.0	T
6767	Simcoe (ck)	88.9	69.1	73.4	32.0	42	34	15	17	10.4	2.8	17.3
6537	(Victoria x H-B) x Colo	88.7	68.7	73.6	34.8	37	35	10	18	10.0	3.0	0.4
5946	Sauk	87.6	66.9	72.6	31.9	38	37	16	19	13.9	7.6	3.3
6608	(Victoria x H-B) x Colo	86.6	67.0	73.2	34.5	37	36	10	18	11.9	1.6	0.1
7084	[Landh x (M x H-J)] x And	86.1	66.4	74.3	34.5	35	38	10	16	0.6	1.4	T
4988	Mo. 0-205	85.7	66.6	73.9	34.2	39	31	11	16	23.9	11.3	0.2
6878	[Landh x (M x H-J)] x And	85.6	67.3	72.7	31.6	37	46	9	18	2.8	0.1	8.9
6933	Clinton x (Boone-Cartier)	85.5	67.5	73.3	35.7	38	26	11	16	20.6	3.8	0.2
7116	Marion x D69-Bond	85.3	65.7	73.3	31.5	37	29	11	18	5.8	2.6	3.1
5864	(Victoria x H-B) x Colo	84.4	64.7	73.7	33.6	39	38	11	17	16.8	0.1	0.9
6939	(Victoria x H-B) x Spooner	84.2	64.3	72.0	34.3	40	39	15	18	11.5	8.8	0.0
5966	Andrew x Clinton	84.0	65.4	73.7	32.7	36	39	11	16	36.1	13.8	0.3
6936	[Landh x (M x H-J)] x And	83.8	66.1	74.2	32.8	36	42	11	16	1.0	0.1	0.3
4170	Andrew (ck)	83.8	67.6	74.9	32.7	37	37	9	16	26.3	18.3	0.7
6752	Beedee	83.7	63.7	72.1	34.1	37	34	14	16	10.3	6.4	0.5
6913	(Bond-Rain x H-J) x Landh	83.2	66.9	74.3	34.7	38	33	9	16	3.7	2.1	1.0
5441	Jackson	83.1	63.7	74.1	34.2	38	36	13	16	45.9	15.1	0.7
5647	Clarion	83.1	65.6	74.0	33.9	38	27	12	16	39.3	16.4	0.2
6701	Clintland	82.5	63.9	74.1	34.0	36	32	11	15	1.0	28.8	3.5
7117	D69-Bond x (V-R x Bannock)	81.5	65.2	74.5	34.1	36	35	11	15	32.3	16.3	1.9
6668	Clinton x (Boone-Cartier)	81.5	60.1	71.8	32.1	39	40	15	18	26.1	3.0	3.2
5440	Waubay	81.4	64.4	73.5	33.6	37	25	12	16	36.4	15.0	0.6
6765	Minland	81.4	65.4	75.4	29.7	37	31	8	18	3.9	3.8	1.0
6934	Nem x (Clin x Boone-Cart)	81.1	61.3	71.9	34.9	38	35	14	16	13.9	10.0	1.1
7020	Cl x [Vic x (Vic x H-B)]	80.5	63.3	74.4	33.4	35	35	10	15	18.1	0.2	0.4
7030	Cl x [Vic x (Vic x H-B)]	80.2	61.2	72.5	33.3	37	30	10	16	16.3	1.0	5.8
6929	Logan	78.9	62.5	75.2	32.8	38	33	11	15	29.0	18.8	1.0
6928	Benton x Marion	77.7	61.6	74.7	32.7	37	38	10	15	29.1	47.5	3.3
6644	Clinton ² x Ark. 674	77.5	61.2	73.5	32.8	35	31	11	15	22.3	25.0	3.3
6642	Newton	77.3	59.9	72.7	33.9	35	31	12	16	12.7	13.8	1.0
2027	Gopher (ck)	75.4	57.3	73.0	30.2	38	51	15	16	46.0	22.6	19.5
4259	Clinton 59 (ck)	75.3	57.1	73.0	32.8	35	32	12	15	42.3	32.5	2.8
5927	Ransom	75.1	59.2	74.2	33.3	35	34	9	16	17.3	0.2	18.3
6930	Bentland	73.2	57.0	73.4	33.2	39	42	12	16	2.4	34.3	1.3
6927	(Boone-Cartier) x Clinton	72.4	58.1	74.0	34.0	35	30	7	14	25.0	35.5	0.3
6916	Fayette	72.1	55.7	72.3	32.9	33	37	10	15	2.1	6.3	0.7

^{1/}Number of North Central locations averaged.^{2/}Average for most recent year grown in Uniform North Central Smut Nursery.

Table 11. Yields on stations reporting of varieties and selections in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 17 N.C. Stations	DeKalb Ill.	Urbana Ill.	Lafayette Ind.	Ames Iowa	Kansan Kansan	Pomahatan Kansan	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Dickinson N. D.	Fargo N. D.	Minot N. D.	Columbus Ohio	Wooster Ohio	Brookings S. D.	Madison Wis.
Bushels																			
5961	[Rx (VxH-B)] x [Ax (VxH-B)]	91.1	96.0	95.1	117.6	134.7	99.5	109.0	101.2	72.9	99.5	90.4	78.1	93.5	66.8	59.6	57.4	97.2	79.9
5962	[Rx (VxH-B)] x [Ax (VxH-B)]	91.0	84.5	83.0	118.7	134.2	83.5	115.0	94.2	69.4	118.8	80.2	78.3	103.7	59.1	69.6	59.1	101.3	95.0
7083	[Landh x (M x H-J)] x And	89.5	84.0	79.4	117.1	144.9	105.0	104.0	78.4	76.9	87.3	76.8	77.5	88.9	65.8	71.0	72.3	87.7	105.3
6935	[Landh x (M x H-J)] x C1	89.4	85.0	76.9	70.8	142.7	110.0	104.7	78.3	74.5	89.0	82.8	80.1	101.9	74.4	69.6	64.0	96.8	117.7
6767	Simcoe (ck)	88.9	84.2	84.7	124.0	141.2	70.0	105.3	104.6	73.8	91.4	89.8	83.5	89.7	68.1	74.5	66.8	92.9	66.4
6537	(Victoria x H-B) x Colo	88.7	76.0	76.9	104.4	151.5	92.0	103.0	86.7	78.7	94.1	80.5	84.5	89.1	63.2	71.4	73.0	97.2	86.1
5946	Sauk	87.6	86.9	85.4	95.6	137.5	84.5	119.7	113.1	72.5	85.8	86.4	79.2	63.8	59.9	74.0	70.7	92.4	82.6
6608	(Victoria x H-B) x Colo	86.6	82.1	86.9	105.7	137.0	82.5	111.3	87.6	73.7	98.9	73.5	82.1	79.7	56.6	70.6	78.8	90.9	74.3
7084	[Landh x (M x H-J)] x And	86.1	82.8	83.7	124.0	133.9	105.5	104.7	89.7	73.8	93.1	61.4	79.3	74.1	60.1	62.3	57.1	82.0	96.4
4988	Mo. 0-205	85.7	74.3	84.4	103.9	137.4	90.0	96.3	94.6	70.0	99.0	69.7	72.1	74.9	68.0	69.4	64.1	100.4	87.6
6878	[Landh x (M x H-J)] x And	85.6	78.3	86.0	109.5	155.8	87.5	114.7	75.4	74.0	94.9	80.4	72.4	86.7	45.9	60.2	68.8	91.4	73.4
6933	Clinton x (Boone-Cartier)	85.5	79.6	81.5	107.3	148.6	81.0	99.7	94.1	81.4	90.1	62.4	65.9	78.3	63.5	57.8	72.2	91.3	93.1
7116	Marion x D69-Bond	85.3	77.7	87.6	101.2	150.5	85.0	100.3	93.0	78.5	78.6	54.8	81.6	74.2	64.0	63.4	63.2	90.0	106.2
5864	(Victoria x H-B) x Colo	84.4	79.8	68.2	78.2	137.6	82.0	112.7	95.8	74.2	90.2	69.3	89.3	79.3	59.5	68.8	69.7	106.7	73.3
6939	(Victoria x H-B) x Spooner	84.2	78.1	80.4	108.2	125.0	71.0	100.3	99.9	75.1	93.9	63.4	81.7	71.8	59.1	66.2	67.3	96.5	92.9
5966	Andrew x Clinton	84.0	83.8	77.5	97.0	144.0	70.5	81.7	102.4	81.9	102.4	74.5	81.3	76.9	59.0	69.7	70.0	88.4	67.2
6936	[Landh x (M x H-J)] x And	83.8	81.5	80.0	107.9	139.7	89.5	93.7	82.4	71.3	95.5	58.6	56.9	87.5	63.4	61.2	60.3	94.5	99.9
4170	Andrew (ck)	83.8	70.4	81.8	120.2	147.3	71.0	104.3	90.0	80.6	91.0	67.4	68.1	61.5	68.9	65.7	62.5	92.4	80.9
6752	Beedee	83.7	78.6	79.4	76.2	135.7	84.5	109.3	87.9	75.2	87.6	82.0	60.4	76.7	69.7	68.4	62.0	93.2	96.4
6913	(Bond-Rain x H-J) x Landh	83.2	76.4	88.3	124.5	132.2	97.5	99.3	78.0	71.6	88.0	67.0	58.7	72.5	34.6	68.4	59.3	91.3	107.5
5441	Jackson	83.1	82.5	75.8	77.4	127.2	74.5	92.3	92.8	72.7	94.4	79.2	75.3	82.6	73.4	74.6	77.5	92.1	68.3
5647	Clarion	83.1	78.9	80.4	94.0	141.1	71.0	101.7	96.0	73.7	91.9	72.0	74.0	78.5	52.9	74.4	64.9	94.1	73.9
6701	Clinton	82.5	85.7	70.2	123.6	129.3	88.0	82.0	88.3	80.1	97.0	58.7	58.9	65.7	61.2	71.9	69.2	77.9	95.0
7117	D69-Bond x (V-R x Bannock)	81.5	80.8	84.2	96.5	140.6	85.5	84.3	93.5	89.9	98.9	55.6	51.7	65.1	49.0	67.9	68.2	92.8	81.0
6668	Clinton x (Boone-Cartier)	81.5	84.2	74.4	50.2	131.1	84.0	96.0	120.5	72.5	90.4	64.1	83.3	51.1	61.8	74.0	67.1	89.1	92.2
5440	Waubay	81.4	74.7	82.3	98.7	139.0	73.0	106.0	75.5	76.2	93.1	74.6	74.1	72.9	43.3	66.8	62.7	93.9	76.6
6765	Minland	81.4	75.0	79.7	131.3	138.0	93.0	94.3	80.5	71.4	73.3	66.4	59.6	72.3	52.2	64.0	55.6	85.7	91.2
6934	Nem x (Clin x Boone-Cart)	81.1	79.2	79.5	62.5	134.0	93.0	96.7	92.9	73.4	94.4	67.5	66.9	77.0	55.1	61.3	60.4	92.9	92.1
7020	C1 x [Vic x (Vic x H-B)]	80.5	73.0	92.0	98.6	132.9	90.0	94.7	86.4	79.9	91.4	58.6	74.0	43.7	51.7	59.0	72.0	90.4	80.2
7030	C1 x [Vic x (Vic x H-B)]	80.2	72.6	79.2	106.7	130.7	94.5	100.7	85.9	84.3	94.8	54.6	58.1	42.9	60.4	64.7	71.2	81.6	81.0
6929	Logan	78.9	72.4	79.4	95.6	126.9	86.0	77.3	92.1	83.6	88.7	56.4	67.6	73.3	57.4	61.3	67.0	82.5	74.5
6928	Benton x Marion	77.7	83.7	84.0	91.3	131.0	56.0	84.3	84.5	82.9	93.9	65.2	59.9	46.6	59.6	76.6	63.9	82.3	75.5
6644	Clinton ² x Ark. 674	77.5	74.2	81.4	119.0	123.5	63.0	80.3	88.9	78.2	87.8	53.0	61.3	67.1	49.5	71.2	61.9	78.5	78.4
6642	Newton	77.3	80.1	80.6	71.0	141.5	77.5	104.0	94.2	68.4	94.8	53.1	54.3	54.7	56.7	55.6	65.4	83.4	78.0
2027	Gopher (ck)	75.4	71.4	66.2	47.2	133.4	57.5	66.3	88.0	64.6	89.5	95.2	78.1	62.2	68.6	69.6	76.4	89.5	58.4
4259	Clinton 59 (ck)	75.3	81.0	62.4	83.4	120.0	74.0	78.0	96.0	73.6	102.3	55.9	65.1	51.4	63.2	62.5	72.0	75.1	64.3
5927	Ransom	75.1	71.4	67.9	73.4	133.4	71.0	96.3	76.5	74.8	82.7	55.6	63.5	78.3	57.3	54.6	51.7	90.8	77.3
6930	Bentland	73.2	77.8	59.1	90.8	119.5	69.0	71.7	88.8	81.6	89.2	54.6	52.8	54.2	46.3	67.9	63.3	82.1	76.5
6927	(Boone-Cartier) x Clinton	72.4	52.4	74.5	84.3	129.7	63.0	68.7	89.7	81.2	91.4	50.5	57.9	47.3	44.1	74.4	66.3	81.4	73.8
6916	Fayette	72.1	63.8	84.2	36.5	135.1	70.0	91.7	70.9	62.0	89.2	58.3	56.5	61.9	62.2	49.5	59.0	88.3	86.0

¹/Adjusted yield, determined on basis of comparative performance at other locations in the same state.

Table 12. Calculated yields in bushels of groats per acre of varieties and selections in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Bushels											Wt. S. D.	Madison
		Av. 12 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Powhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Fargo N. D.	Wooster Ohio	Brookings S. D.	
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	71.7	62	87	99	85	70	48	88	59	76	44	74	69
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	70.9	72	87	100	81	76	52	75	68	69	44	71	57
6767	Simcoe (ck)	69.1	64	89	103	78	78	53	68	67	65	50	68	48
6537	(Victoria x H-B) x Colo	68.7	57	76	110	76	64	57	70	61	65	55	71	63
7083	[Landh x (M x H-J)] x And	67.8	60	84	103	75	57	57	64	56	63	53	65	77
4170	Andrew (ck)	67.6	63	90	114	78	68	60	70	51	42	48	70	58
6933	Clinton x (Boone-Cartier)	67.5	62	76	109	73	69	60	71	46	56	54	66	69
6878	[Landh x (M x H-J)] x And	67.3	64	80	113	83	54	52	70	59	62	51	68	54
6608	(Victoria x H-B) x Colo	67.0	65	76	101	82	64	53	74	55	58	60	65	53
5946	Sauk	66.9	65	65	99	88	84	53	63	65	46	53	67	58
6913	(Bond-Rain x H-J) x Landh	66.9	66	93	98	73	59	53	65	50	53	44	69	82
4988	Mo. O-205	66.6	64	75	102	71	70	51	74	52	54	48	74	64
7084	[Landh x (M x H-J)] x And	66.4	64	94	98	75	67	53	69	46	55	43	62	72
6936	[Landh x (M x H-J)] x And	66.1	62	80	102	70	60	53	72	44	65	46	69	72
7116	Marion x D69-Bond	65.7	65	72	110	73	69	56	59	41	53	47	67	78
5647	Clarion	65.6	60	68	106	75	73	54	70	54	56	48	70	53
5966	Andrew x Clinton	65.4	58	70	107	61	76	61	77	56	55	53	65	47
6765	Minland	65.4	61	102	103	71	61	52	56	51	53	42	64	70
7117	D69-Bond x (V-R x Bannock)	65.2	65	70	105	63	69	66	74	42	47	52	71	59
6935	[Landh x (M x H-J)] x Cl	65.0	56	48	99	74	55	53	64	52	57	53	68	87
5864	(Victoria x H-B) x Colo	64.7	52	56	101	83	71	55	66	52	52	46	69	56
5440	Waubay	64.4	62	71	102	78	56	56	69	55	52	46	69	56
6939	(Victoria x H-B) x Spooner	64.3	62	73	88	73	71	53	69	47	51	50	70	66
6701	Clintonland	63.9	53	91	93	61	66	59	73	44	46	52	58	71
6752	Beedee	63.7	58	52	97	79	65	54	64	60	55	46	66	69
5441	Jackson	63.7	58	55	93	68	69	56	70	59	60	59	69	51
7020	Cl x [Vic x (Vic x H-B)]	63.3	70	72	100	70	65	59	69	45	32	55	67	59
6929	Logan	62.5	61	71	96	58	70	62	68	43	54	51	61	55
6928	Benton x Marion	61.6	64	67	100	63	64	61	73	50	32	49	62	56
6934	Nem x (Clin x Boone-Cart)	61.3	59	42	96	70	67	52	69	50	53	45	66	67
7030	Cl x [Vic x (Vic x H-B)]	61.2	58	76	94	73	63	61	69	40	31	53	58	59
6644	Clinton ² x Ark. 674	61.2	61	88	91	58	66	58	65	40	46	46	59	57
6668	Clinton x (Boone-Cartier)	60.1	56	32	94	71	90	52	65	47	35	49	63	66
6642	Newton	59.9	59	48	102	77	69	52	69	40	39	48	60	56
5927	Ransom	59.2	52	53	99	72	57	55	62	42	57	39	67	57
6927	(Boone-Cartier) x Clinton	58.1	56	63	98	51	68	59	69	38	32	50	59	54
2027	Gopher (ck)	57.3	49	33	98	48	65	47	68	72	44	59	65	39
4259	Clinton 59 (ck)	57.1	47	59	88	58	71	54	77	42	35	54	56	47
6930	Bentland	57.0	44	66	88	52	66	59	68	41	37	47	60	56
6916	Fayette	55.7	63	24	95	68	52	46	65	43	44	43	63	63

Table 13. Percentage groats^{1/} of varieties and selections in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 12 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Powhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Fargo N. D.	Wooster Ohio	Brookings S. D.	Madison Wis.	Aberdeen Idaho

^{1/}Groat percentage determined by dehulling three 25-gram samples with a centrifugal impact dehuller supplied by the Quaker Oats Company.

Table 14. Test weights on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Ad. 18 N.C. Stations	DeKalb Ill.	Urbana Ill.	Lafayette Ind.	Ames Iowa	Manhattan Kansas	Powhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Mo. Columbia	Lincoln Nebr.	Dickinson N. D.	Fargo N. D.	Langdon N. D.	Minot N. D.	Columbus Ohio	Wooster Ohio	Brookings S. D.	Madison Wisc.
											Pounds									
6933	Clinton x (Boone-Cartier)	35.7	40.5	34.8	32.7	39.0	31.8	37.2	36.0	29.0	38.0	36.1	39.5	34.5	30.5	36.0	37.0	36.5	37.5	35.3
6934	Nem x (Clin x Boone-Cart)	34.9	40.8	35.4	27.0	37.7	32.0	37.8	34.0	31.3	35.5	36.9	38.0	31.5	30.5	39.0	35.0	34.4	38.8	32.9
6937	(Victoria x H-B) x Colo	34.8	38.2	34.2	31.7	38.0	32.5	36.0	34.0	27.0	34.5	36.9	37.5	34.5	34.5	38.0	36.0	35.5	37.3	29.8
6913	(Bond-Rain x H-J) x Landh	34.7	40.8	34.4	38.5	37.6	32.0	34.8	35.0	31.2	33.0	32.3	36.5	35.0	31.0	32.0	35.5	34.6	35.5	35.3
6608	(Victoria x H-B) x Colo	34.5	37.1	32.5	33.6	37.6	31.5	35.7	34.0	29.0	34.5	35.3	38.0	33.0	36.0	38.0	34.0	34.4	36.4	28.9
7084	[Landh x (M x H-J)] x And	34.5	37.7	32.2	33.8	37.9	32.8	35.5	34.0	28.7	33.5	35.3	37.5	33.5	35.5	36.0	35.5	34.5	32.2	32.4
6939	(Victoria x H-B) x Spooner	34.3	38.0	32.2	33.6	36.5	30.5	36.0	34.0	30.3	33.0	36.3	38.0	34.5	33.5	35.0	35.5	35.1	37.5	28.3
4988	Mo. O-205	34.2	38.8	39.5	33.6	37.0	30.3	35.5	35.0	28.3	33.0	35.5	37.0	32.5	30.5	36.0	35.0	34.1	34.4	28.9
5441	Jackson	34.2	39.9	33.3	27.3	36.5	31.3	37.0	35.0	28.0	37.5	36.5	39.5	31.5	30.5	38.0	36.5	35.1	37.8	24.4
6752	Beedee	34.1	38.8	36.4	27.6	34.2	31.0	37.0	38.0	30.8	33.5	37.1	37.0	33.0	30.5	35.0	35.5	36.9	31.8	30.3
7117	D69-Bond x (V-R x Bannock)	34.1	36.9	33.7	31.5	37.1	31.3	36.8	34.0	29.0	34.5	35.8	37.0	30.5	30.0	34.5	35.5	35.9	37.9	31.1
6701	Clintonland	34.0	37.0	35.1	37.7	36.4	33.3	35.0	34.0	30.3	34.5	33.0	37.0	27.5	30.5	34.5	34.5	33.7	36.1	31.6
6927	(Boone-Cartier) x Clinton	34.0	36.3	34.0	37.4	38.2	32.0	34.5	37.0	30.5	34.5	36.1	36.0	28.5	27.5	33.0	34.0	34.0	35.6	32.6
5647	Clarion	33.9	36.3	34.4	34.5	36.4	29.8	34.5	34.0	30.2	37.0	34.1	37.0	30.5	30.0	36.0	35.0	32.6	37.3	29.5
6642	Newton	33.9	37.3	34.4	24.0	37.2	31.0	35.5	33.0	30.2	34.5	34.4	37.0	32.5	30.5	39.0	35.0	35.5	38.5	30.1
5864	(Victoria x H-B) x Colo	33.6	37.1	32.0	29.8	36.2	30.8	35.8	34.0	27.3	33.5	35.4	38.0	31.5	31.0	37.5	34.5	34.2	38.5	27.3
5440	Waubay	33.6	36.7	33.8	32.3	36.3	29.5	33.7	33.0	30.2	34.0	34.8	37.5	28.5	31.0	35.5	33.5	33.5	37.8	29.6
7020	Cl x [Vic x (Vic x H-B)]	33.4	40.3	31.9	33.1	33.0	29.3	33.8	35.0	28.7	34.5	34.3	36.0	30.5	31.5	32.0	34.5	34.1	36.5	30.5
7030	Cl x [Vic x (Vic x H-B)]	33.3	35.0	32.6	34.0	35.6	31.5	35.2	36.0	29.3	32.5	34.0	37.5	29.0	30.0	33.0	33.5	35.4	32.6	32.0
5927	Ransom	33.3	38.2	30.3	29.5	35.8	30.5	34.0	35.0	31.0	34.5	32.8	36.5	30.5	31.0	35.0	34.5	34.6	35.7	30.8
6930	Bentland	33.2	36.8	31.3	31.2	36.3	31.0	34.2	35.0	30.8	35.5	34.6	35.5	26.0	31.5	33.5	33.5	33.0	38.4	30.5
7083	[Landh x (M x H-J)] x And	33.1	37.1	31.5	32.6	36.3	30.3	34.3	33.0	25.3	31.5	34.4	36.0	32.0	33.0	35.0	34.5	31.6	36.8	30.9
5961	[Rx(VH-B)] x [Ax(VH-B)]	32.9	35.4	35.5	33.5	36.7	28.8	33.5	32.0	26.7	33.0	32.9	37.0	34.0	29.0	32.5	32.5	32.8	36.7	27.3
6916	Fayette	32.9	35.1	32.9	23.8	34.5	30.8	34.8	34.0	30.2	31.5	35.7	37.0	32.5	30.0	32.0	36.5	34.3	35.6	31.0
6936	[Landh x (M x H-J)] x And	32.8	35.8	32.1	32.8	35.8	30.8	34.5	33.0	27.8	32.5	32.9	36.5	31.5	34.0	35.5	32.5	32.0	34.9	26.5
6929	Logan	32.8	35.9	31.9	32.4	36.0	30.3	33.7	34.0	30.0	35.0	32.3	36.5	30.0	30.5	32.0	33.0	32.0	35.3	29.3
6644	Clinton ² x Ark. 674	32.8	35.8	34.3	35.1	36.6	30.0	33.3	34.0	28.7	33.5	33.4	35.5	25.0	28.5	32.5	36.0	33.5	35.1	30.1
4259	Clinton 59 (ck)	32.8	36.3	33.5	27.7	36.8	29.5	34.0	34.0	30.3	34.5	34.3	37.5	26.0	27.0	36.0	35.5	33.6	37.2	25.9
5966	Andrew x Clinton	32.7	37.0	32.6	28.5	35.9	29.8	34.2	34.0	29.7	34.0	35.1	35.5	28.5	28.5	35.0	35.0	34.8	37.0	25.5
4170	Andrew (ck)	32.7	36.0	30.7	34.1	37.7	30.0	34.2	34.0	30.2	34.5	35.2	37.0	23.0	24.0	34.0	34.0	33.5	36.7	29.3
6928	Benton x Marion	32.7	41.7	32.5	31.0	36.8	28.5	32.3	34.0	29.2	35.5	33.7	36.0	25.0	26.5	32.5	34.0	33.1	36.0	29.8
5962	[Rx(VH-B)] x [Ax(VH-B)]	32.5	35.9	31.4	37.0	35.8	29.0	33.5	32.0	28.7	31.5	31.2	37.0	33.0	31.0	32.5	33.0	31.7	34.4	29.4
6668	Clinton x (Boone-Cartier)	32.1	36.6	31.0	18.8	35.6	29.0	33.2	33.0	28.0	35.5	32.9	35.0	28.5	32.5	36.5	33.5	33.3	35.3	27.0
6767	Sincoe (ck)	32.0	36.8	32.9	26.8	35.0	26.5	34.0	33.0	26.3	36.0	34.3	36.0	32.0	25.5	34.0	34.0	33.3	36.4	22.8
5946	Sauk	31.9	35.6	33.2	24.7	34.3	27.5	35.7	32.0	29.3	31.0	34.8	36.0	26.5	30.0	35.0	34.0	34.0	35.5	24.4
6878	[Landh x (M x H-J)] x And	31.6	34.3	27.0	31.5	34.2	29.3	32.0	31.0	24.7	32.0	32.5	35.5	28.5	32.0	35.0	31.5	30.6	34.0	29.3
7116	Marion x D69-Bond	31.5	33.9	31.4	27.6	34.1	27.8	32.0	33.0	26.7	31.5	31.6	35.5	28.5	31.0	33.0	33.0	33.3	33.7	29.4
6935	[Landh x (M x H-J)] x Cl	30.9	35.0	28.9	24.7	32.8	26.5	32.2	32.0	23.8	31.0	33.1	33.0	30.5	31.5	34.5	30.0	31.3	34.1	29.4
2027	Gopher (ck)	30.2	36.7	30.3	21.6	34.9	22.5	30.2	31.0	26.5	34.5	33.2	36.0	26.5	21.5	35.5	32.0	33.2	36.9	20.0
6765	Minland	29.7	33.3	29.5	34.1	32.0	27.0	30.5	29.0	23.8	28.5	28.9	33.0	29.0	26.5	31.0	30.5	29.6	31.6	27.0

¹/Adjusted test weight, determined on basis of comparative performance at other locations in the same state.

Table 15. Plant height on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 13 N.C. Stations	Urbana Ill.	Ames Iowa	Manhattan Kansas	Powhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Dickinson N. D.	Langdon N. D.	Minot N. D.	Columbus Ohio	Brookings S. D.
			Inches												
6916	Fayette	33	34	37	34	33	33	32	40	29	31	32	34	29	28
6644	Clinton ² x Ark. 674	35	40	39	35	36	35	32	41	29	36	36	35	32	29
6642	Newton	35	38	40	37	38	35	33	42	29	28	35	36	32	32
7084	[Landh x (M x H-J)] x And	35	36	40	36	38	37	35	42	30	32	35	38	34	24
6927	(Boone-Cartier) x Clinton	35	39	39	36	35	35	32	41	32	37	33	35	33	31
5927	Ransom	35	39	40	39	35	37	33	42	30	33	36	37	30	28
7020	Cl x [Vic x (Vic x H-B)]	35	40	39	36	36	36	32	42	30	34	35	37	31	32
4259	Clinton 59 (ok)	35	41	38	36	37	36	31	42	28	36	35	37	32	32
5966	Andrew x Clinton	36	40	39	35	37	35	33	41	29	37	33	38	35	30
7117	D69-Bond x (V-R x Bannock)	36	39	40	35	34	35	33	41	29	34	35	42	32	33
6936	[Landh x (M x H-J)] x And	36	36	42	36	37	38	35	42	30	32	36	39	33	33
6935	[Landh x (M x H-J)] x Cl	36	39	40	39	40	35	33	41	31	35	34	39	30	35
6701	Clintonland	36	43	42	36	38	34	34	43	29	36	35	37	34	32
7030	Cl x [Vic x (Vic x H-B)]	37	40	41	38	39	37	32	43	31	36	36	39	34	32
7116	Marion x D69-Bond	37	41	42	36	38	37	32	42	29	34	36	42	33	33
4170	Andrew (ok)	37	39	42	36	37	38	35	44	31	32	38	37	34	33
6537	(Victoria x H-B) x Colo	37	39	43	36	38	38	32	42	31	40	38	39	33	32
6928	Benton x Marion	37	41	42	37	39	37	34	43	30	38	36	39	36	30
5440	Waubay	37	44	41	39	38	36	32	42	31	39	37	39	32	33
7083	[Landh x (M x H-J)] x And	37	39	44	36	40	36	35	44	31	32	35	42	36	34
6765	Minland	37	41	44	35	40	39	35	44	29	34	35	40	35	33
6608	(Victoria x H-B) x Colo	37	40	42	35	38	38	32	43	32	39	38	40	34	34
6752	Beedee	37	41	42	38	39	37	37	45	33	33	37	38	34	32
6878	[Landh x (M x H-J)] x And	37	36	43	36	40	37	36	43	33	36	34	42	34	36
6913	(Bond-Rain x H-J) x Landh	38	41	42	38	39	39	36	43	33	36	38	41	34	34
5647	Clarion	38	43	42	37	41	37	34	43	29	38	38	41	33	32
6933	Clinton x (Boone-Cartier)	38	42	43	37	39	39	35	45	31	40	37	37	34	34
2027	Gopher (ok)	38	40	42	45	46	35	34	43	31	36	32	39	34	37
6934	Nem x (Clin x Boone-Cart)	38	41	43	39	40	40	36	45	31	33	37	41	35	34
6929	Logan	38	44	42	38	38	38	35	45	31	39	38	41	36	31
5946	Sauk	38	41	44	37	39	39	35	44	33	38	35	40	34	37
5441	Jackson	38	43	43	37	41	38	35	45	33	38	36	41	33	35
4988	Mo. O-205	39	43	43	39	42	40	37	45	32	35	35	39	35	35
6930	Beutland	39	42	44	37	41	38	36	46	32	36	36	41	38	35
6668	Clinton x (Boone-Cartier)	39	42	43	37	41	40	35	43	32	40	41	40	35	34
5864	(Victoria x H-B) x Colo	39	42	45	38	40	40	35	44	34	41	37	40	35	35
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	39	44	46	41	42	39	36	45	34	34	37	39	34	36
6939	(Victoria x H-B) x Spooner	40	42	44	41	44	42	37	46	35	40	38	40	37	39
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	41	45	48	41	43	41	37	45	36	37	39	41	38	38
6767	Sineoe (ok)	42	47	47	41	44	42	37	46	36	39	40	44	38	41

Table 16. Percent of lodging and clr factor on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 14 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Manhattan Kansas	Powhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Fargo N. D.	Columbus Ohio	Wooster Ohio	Brookings S. D.	Madison Wis.	Ames Iowa	E. Lansing Mich.
									Percent								clr	clr
5440	Waubay	25	25	70	35	10	5	0	87	23	0	20	0	6	5	61	.65	.165
6933	Clinton x (Boone-Cartier)	26	28	70	27	25	2	0	83	43	0	30	0	0	20	31	.55	.106
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	26	13	90	38	25	2	2	57	29	0	20	0	11	20	54	.55	.108
5647	Clarion	27	31	60	38	15	7	4	93	34	1	40	0	8	5	55	.64	.137
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	29	13	90	27	25	2	0	95	33	0	25	0	4	20	60	.46	.105
7116	Marion x D69-Bond	29	34	90	22	15	7	3	87	45	0	25	0	15	10	55	.54	.116
7030	Cl x [Vic x (Vic x H-B)]	30	24	80	55	10	8	0	90	49	0	30	4	14	1	52	.65	.128
6927	(Boone-Cartier) x Clinton	30	19	50	9	25	70	1	77	44	2	50	0	10	5	63	.83	.127
6642	Newton	31	11	100	17	25	0	21	97	34	0	50	0	2	10	60	.56	.116
6765	Minland	31	38	80	35	10	5	20	90	40	0	20	2	8	40	40	.61	.102
4988	Mo. O-205	31	27	100	34	10	2	12	90	28	0	40	0	5	20	71	.43	.062
6644	Clinton ² x Ark. 674	31	20	70	12	8	57	0	93	39	7	40	0	2	5	61	.58	.109
6701	Clintonland	32	22	60	28	10	53	0	97	36	0	70	0	8	5	55	.52	.169
4259	Clinton 59 (ck)	32	38	60	10	10	60	0	100	43	2	40	12	15	70	31	.52	.141
6913	(Bond-Rain x H-J) x Landh	33	22	70	37	15	17	9	100	41	0	40	0	4	30	66	.62	.118
6929	Logan	33	32	80	19	30	17	0	100	43	3	60	0	10	71	71	.56	.098
6767	Simcoe (ck)	34	31	90	53	20	5	0	83	43	3	30	0	2	20	72	.60	.087
5927	Ransom	34	52	100	13	40	2	0	93	45	3	30	5	1	3	64	.66	.133
6752	Beedee	34	32	100	65	30	1	3	93	53	0	20	0	14	5	61	.55	.127
6537	(Victoria x H-B) x Colo	35	43	90	60	35	2	4	93	60	0	50	2	5	10	53	.70	.097
6934	Nem x (Clin x Boone-Cart)	35	41	100	70	25	1	12	77	43	0	40	0	16	5	61	.63	.127
7117	D69-Bond x (V-R x Bannock)	35	35	100	43	25	23	1	97	48	0	25	0	19	30	62	.43	.092
7020	Cl x [Vic x (Vic x H-B)]	35	37	80	48	20	7	21	93	54	0	40	0	38	5	71	.48	.128
5441	Jackson	36	51	100	57	35	5	0	83	34	1	40	0	19	10	71	.59	.134
6608	(Victoria x H-B) x Colo	36	51	80	53	35	7	16	87	53	2	20	0	10	30	71	.52	.085
6916	Fayette	37	30	100	40	15	2	0	97	48	0	45	5	4	10	74	.56	.097
4170	Andrew (ck)	37	49	80	73	15	5	12	93	54	0	60	0	22	1	62	.55	.096
5946	Sauk	37	50	100	60	15	7	10	90	44	0	70	2	4	3	68	.52	.128
6928	Benton x Marion	38	58	90	37	15	40	0	90	49	0	40	0	16	5	65	.80	.112
5864	(Victoria x H-B) x Colo	38	52	80	100	25	2	8	93	44	0	40	0	20	20	63	.53	.097
7084	[Landh x (M x H-J)] x And	38	57	80	37	30	5	16	97	65	0	40	2	20	20	66	.62	.127
5966	Andrew x Clinton	39	46	90	47	30	33	21	87	40	2	40	5	18	25	59	.70	.095
6939	(Victoria x H-B) x Spooner	39	55	80	90	20	7	31	77	40	2	40	0	28	20	60	.74	.096
6935	[Landh x (M x H-J)] x Cl	40	53	90	95	20	10	8	97	59	0	25	0	34	10	58	.81	.103
6668	Clinton x (Boone-Cartier)	40	50	90	73	20	1	53	73	55	0	50	0	9	5	65	.53	.114
6930	Bentland	42	51	100	67	20	63	0	90	48	0	70	0	25	10	57	.55	.086
6936	[Landh x (M x H-J)] x And	42	55	90	92	20	7	30	97	63	2	40	2	44	5	59	.48	.124
7083	[Landh x (M x H-J)] x And	46	63	80	90	20	8	40	97	65	0	50	25	48	20	63	.53	.101
6878	[Landh x (M x H-J)] x And	46	59	100	100	20	2	39	90	41	10	50	5	48	20	63	.53	.101
2027	Gopher (ck)	51	68	100	37	100	100	6	90	46	2	60	0	20	10	69	.57	.136

Table 17. Date of heading on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 14 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Manhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Dickinson N. D.	Fargo N. D.	Langdon N. D.	Minot N. D.	Brookings S. D.	Madison Wis.
									Date							
6927	(Boone-Cartier) x Clinton	6/7	5/30	5/30	6/2	5/21	6/10	6/6	5/21	5/26	6/19	6/17	7/10	6/20	5/30	6/12
6765	Minland	8	31	31	4	24	10	10	23	26	19	17	11	23	30	11
6878	[Landh x (M x H-J)] x And	9	6/1	6/2	4	24	10	9	25	28	19	17	11	22	31	14
4170	Andrew (ck)	9	1	6/2	4	25	9	10	23	27	21	19	12	23	6/1	14
5927	Ranson	9	3	3	5	26	10	8	23	27	21	18	10	21	2	14
6913	(Bond-Rain x H-J) x Landh	9	2	2	5	25	10	10	25	28	19	17	10	21	2	16
6916	Fayette	10	5/31	2	5	25	12	13	27	26	21	17	12	21	1	15
7020	Cl x [Vic x (Vic x H-B)]	10	6/3	3	5	27	11	13	25	27	21	17	11	23	1	16
6928	Benton x Marion	10	3	5	7	26	9	9	24	28	21	19	12	24	1	15
7083	[Landh x (M x H-J)] x And	10	3	2	6	27	9	10	25	31	21	19	12	25	2	15
6537	(Victoria x H-B) x Colo	10	2	3	6	25	10	12	25	29	21	21	11	25	1	16
7084	[Landh x (M x H-J)] x And	10	3	3	7	25	10	13	23	28	22	19	11	24	2	17
7030	Cl x [Vic x (Vic x H-B)]	10	2	3	7	27	12	10	25	30	21	19	11	24	5/31	16
6608	(Victoria x H-B) x Colo	10	3	3	6	25	10	13	25	29	21	21	11	25	6/2	16
6644	Clinton ² x Ark. 674	11	3	3	6	26	11	12	25	29	21	19	16	24	1	15
6929	Logan	11	3	5	7	27	11	10	25	28	22	21	12	24	2	15
5864	(Victoria x H-B) x Colo	11	3	3	7	28	10	17	26	6/2	21	21	12	26	2	18
5966	Andrew x Clinton	11	3	3	8	25	10	10	25	5/29	29	21	12	25	2	16
7116	Marion x D69-Bond	11	3	4	8	26	11	15	26	28	23	21	10	25	2	18
4988	Mo. O-205	11	2	3	8	28	9	15	25	31	23	21	12	24	2	18
6936	[Landh x (M x H-J)] x And	11	3	3	6	29	10	12	27	31	23	21	14	26	2	16
6933	Clinton x (Boone-Cartier)	11	3	7	7	29	10	13	27	31	22	20	12	24	2	16
6701	Clintonland	11	4	7	8	27	11	13	28	6/1	21	19	11	23	2	17
7117	D69-Bond x (V-R x Bannock)	11	5	7	9	25	13	14	27	5/31	21	17	12	24	1	18
5647	Clarion	12	4	8	10	29	12	12	26	6/1	22	19	11	25	2	17
4259	Clinton 59 (ck)	12	5	7	11	27	11	13	28	1	21	19	12	25	2	17
6642	Newton	12	4	7	8	29	12	14	26	5/31	21	21	13	25	3	19
6930	Bentland	12	4	7	9	30	11	13	26	30	23	19	14	26	4	17
5440	Waubay	12	5	8	11	28	12	12	28	6/2	23	18	11	26	4	17
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	13	4	6	11	31	12	18	27	3	24	22	11	26	6	19
5441	Jackson	13	6	8	12	31	13	17	30	3	25	21	12	27	3	10
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	13	4	6	10	6/1	12	17	27	3	24	22	11	27	5	19
6934	Nem x (Clin x Boone-Cart)	14	5	9	11	5/30	14	16	28	2	24	22	14	27	3	20
6752	Beedee	14	4	6	11	6/1	12	18	28	3	25	25	12	27	6	18
6935	[Landh x (M x H-J)] x Cl	15	5	9	11	4	12	16	6/2	6	26	22	12	27	4	19
6939	(Victoria x H-B) x Spooner	15	5	8	11	4	13	19	5/30	3	25	23	14	28	3	20
2027	Gopher (ck)	15	5	8	11	5	13	18	6/1	4	25	22	13	27	4	20
6767	Simcoe (ck)	15	5	10	12	4	14	20	3	4	25	22	14	28	6	20
6668	Clinton x (Boone-Cartier)	15	5	5	16	2	14	19	2	4	27	26	12	29	6	20
5946	Sauk	16	5	9	14	4	14	20	5/30	7	27	26	17	29	6	21

Table 18. Date of ripening on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 6 N.C. Stations	St. Paul Minn.	Lincoln Nebr.	Dickinson N. D.	Minot N. D.	Brookings S. D.	Madison Wis.
		Date						
6927	(Boone-Cartier) x Clinton	7/14	7/10	7/1	7/30	7/20	7/12	7/12
6929	Logan	15	8	1	29	21	12	17
6644	Clinton ² x Ark. 674	15	9	6/30	30	21	11	17
6916	Fayette	15	8	7/1	30	20	11	18
7020	Cl x [Vic x (Vic x H-B)]	15	9	1	29	19	14	18
6928	Benton x Marion	15	11	6/30	29	21	12	17
6701	Clintland	15	8	7/1	30	21	13	18
4259	Clinton 59 (ck)	15	10	6/30	30	22	13	16
7117	D69-Bond x (V-R x Bannock)	15	10	7/1	29	20	15	17
6913	(Bond-Rain x H-J) x Landh	16	10	1	30	21	12	19
7030	Cl x [Vic x (Vic x H-B)]	16	10	1	29	20	14	19
5927	Ransom	16	8	6/30	8/1	25	11	18
6930	Bentland	16	9	7/1	7/29	22	14	19
7084	[Landh x (M x H-J)] x And	16	8	2	29	24	14	18
5966	Andrew x Clinton	16	8	6/30	8/1	25	13	17
6936	[Landh x (M x H-J)] x And	16	9	7/2	7/29	22	13	20
2027	Gopher (ck)	16	9	1	29	23	17	16
4170	Andrew (ck)	16	9	2	8/1	23	12	18
6642	Newton	16	9	3	7/29	23	13	19
6933	Clinton x (Boone-Cartier)	16	10	1	29	24	13	20
5647	Clarion	16	9	2	30	26	13	17
5440	Waubay	16	9	3	30	23	15	18
6934	Nem x (Clin x Boone-Cart)	16	10	3	30	23	13	19
7083	[Landh x (M x H-J)] x And	16	8	2	29	25	15	20
4988	Mo. O-205	16	11	1	8/1	22	15	18
6752	Beedee	16	11	1	7/29	24	14	20
5441	Jackson	16	11	1	29	24	18	16
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	17	12	3	29	23	16	20
6767	Simcoe (ck)	17	11	2	8/1	22	17	19
5864	(Victoria x H-B) x Colo	17	11	2	1	25	15	19
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	18	11	3	7/30	23	18	20
6608	(Victoria x H-B) x Colo	18	10	1	8/1	29	15	18
6878	[Landh x (M x H-J)] x And	18	7	2	1	26	18	20
6537	(Victoria x H-B) x Colo	18	10	1	1	29	14	20
6939	(Victoria x H-B) x Spooner	18	11	4	1	24	15	20
7116	Marion x D69-Bond	18	11	3	1	25	16	20
6765	Minland	18	10	2	1	29	16	19
6668	Clinton x (Boone-Cartier)	18	10	1	1	29	18	20
6935	[Landh x (M x H-J)] x Cl	18	11	4	1	26	18	20
5946	Sauk	19	11	2	1	29	19	21

Table 19. Type or coefficient of stem rust infection under natural nursery conditions on stations reporting of oat varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 4 N.C. Stations	St. Paul Minn.	Lincoln Nebr.	Dickinson N. D.	Minot N. D.	Brookings S. D.	Fargo N. D.
		%	Type	Type	%	%	%	%
6878	[Landh x (M x H-J)] x And	0.1	HR	VR	0	T	1	T
5864	(Victoria x H-B) x Colo	0.1	S	R	0	0	1	T
6936	[Landh x (M x H-J)] x And	0.1	HR	R	0	T	2	0
7020	C1 x [Vic x (Vic x H-B)]	0.2	HR	R	0	T	T	T
5927	Ransom	0.2	HR	R	0	3	T	T
7030	C1 x [Vic x (Vic x H-B)]	1.0	HR	R	0	T	1	3
7084	[Landh x (M x H-J)] x And	1.4	HR	R	0	T	5	T
7083	[Landh x (M x H-J)] x And	1.4	HR	R	T	T	5	T
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	1.6	HR	R	0	T	1	5
6608	(Victoria x H-B) x Colo	1.6	HR	MR	T	T	1	5
6935	[Landh x (M x H-J)] x C1	2.0	HR	R	0	0	8	0
6913	(Bond-Rain x H-J) x Landh	2.1	HR	R	T	3	T	5
7116	Marion x D69-Bond	2.6	HR-S	R	0	T	5	5
6767	Simcoe (ck)	2.8	S	R	0	T	1	10
6668	Clinton x (Boone-Cartier)	3.0	S	R	0	0	2	10
6537	(Victoria x H-B) x Colo	3.0	HR	MR	0	0	2	10
6765	Minland	3.8	HR	R	0	0	5	10
6933	Clinton x (Boone-Cartier)	3.8	S	R	0	T	5	10
6916	Fayette	6.3	S	R	0	3	2	20
6752	Beedee	6.4	S	MR	T	T	5	20
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	7.1	R-S	R	0	T	3	25
5946	Sauk	7.6	S	R	0	T	10	20
6939	(Victoria x H-B) x Spooner	8.8	HR	R	0	T	5	30
6934	Nem x (Clin x Boone-Cartier)	10.0	S	R	0	0	10	30
4988	Mo. 0-205	11.3	S	R	0	T	5	40
6642	Newton	13.8	S	R	0	0	15	40
5966	Andrew x Clinton	13.8	S	S	0	5	30	20
5440	Waubay	15.0	S	MR	2	3	15	40
5441	Jackson	15.1	S	R	T	T	10	50
7117	D69-Bond x (V-R x Bannock)	16.3	S	R	0	T	5	60
5647	Clarion	16.4	S	MR	T	T	5	60
4170	Andrew (ck)	18.3	S	R	0	T	3	70
6929	Logan	18.8	S	R	15	5	5	50
2027	Gopher (ck)	22.6	S	S	T	5	25	60
6644	Clinton ² x Ark. 674	25.0	S	S	40	30	20	10
6701	Clintland	28.8	S	VS	40	20	40	15
4259	Clinton 59 (ck)	32.5	S	VS	40	40	30	20
6930	Bentland	34.3	S	VS	25	12	30	70
6927	(Boone-Cartier) x Clinton	35.5	S	S	25	12	30	75
6928	Benton x Marion	47.5	S	VS	40	20	40	90

Table 20. Adult and seedling reaction in the field and greenhouse, respectively, to specific races of stem rust, of oat varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Race 6				Race 7				Race 7A				Races 7A & 8				Race 8						
		Greenhouse				Field				Greenhouse				Field				Greenhouse						
		Ames Lowa	St. Paul Minn.	Urban Ill.	Columbia Mo.	Average	Ames Lowa	St. Paul Minn.	Urban Ill.	Columbia Mo.	Average	Ames Lowa	St. Paul Minn.	Urban Ill.	Columbia Mo.	Average	Ames Lowa	St. Paul Minn.	Urban Ill.	Columbia Mo.	Average	Ames Lowa	St. Paul Minn.	
																								Type
		Type	Types	75°	85°	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
4170	Andrew (ck)	4	S	S	Abcd	20	1	10	1	R	R	1	R	R	60	10	35	4	S	75	15	T	1	R
5966	Andrew x Clinton	4	S	S	abcd	75	T	38	4	S	S	4	S	S	6	T	3	2	R	85	85	T	2	R
6752	Beedee	4	S	S	Abcd	20	T	10	1	R	R	1	R	R	50	5	28	4	R	20	20	2	4	S
6930	Bentland	4	S	S	abcd	60	1	30	4	S	S	4	S	S	2	T	1	2	R	20	68	2	2	R
6928	Benton x Marion	4	S	S	abcd	60	5	33	4	S	S	4	S	S	4	T	2	2	R	68	2	2	2	R
6913	(Bond-Rain x H-J) x Landh	1	R	S	ABCD	4	0	2	1	R	R	1	R	R	T	T	T	1	R	15	15	T	1	R
6927	(Boone-Cartier) x Clinton	4	S	S	abcd	50	1	25	4	S	S	4	S	S	1	T	T	2	R	85	85	2	2	R
5647	Clarion	4	S	S	Abcd	20	5	13	1	R	R	1	R	R	60	10	35	4	R	85	85	4	4	S
6701	Clintonland	4	S	S	abcd	60	1	31	4	S	S	4	S	S	1	5	3	2	R	60	60	2	2	R
4259	Clinton 59 (ck)	4	S	S	abcd	50	5	28	4	S	S	4	S	S	1	T	1	2	R	75	75	2	2	R
6644	Clinton ² x Ark. 674	4	S	S	abcd	32	1	16	4	S	S	4	S	S	2	T	1	2	R	45	45	2	2	R
6668	Clinton x {Boone-Cartier}	4	S	S	Abcd	12	1	6	1	R	R	1	R	R	50	1	26	4	R	68	68	4	4	S
6933	Clinton x {Boone-Cartier}	4	S	S	Abcd	20	4	12	1	R	R	1	R	R	75	5	40	4	R	68	68	4	4	S
7030	Cl x [Vic x H-B]	1	R	S	ABCD	12	0	6	1*	R	R	1	R	R	1	T	1	1	R	10	10	1	1	R
7020	Cl x [Vic x {Vic x H-B}]	1	R	S	a*BCD	14	0	7	1	R	S	4*	R	S	1	0	1	1	R	60	60	1	1	R
7117	D69-Bond x (V-R x Bannock)	4	S	S	Abcd	12	5	9	1	R	R	1	R	R	60	20	40	4	R	20	20	4	4	S
6916	Fayette	4	S	S	Abcd	10	5	8	1	R	R	1	R	R	80	20	50	4	R	60	60	4	4	S
2027	Gopher (ck)	4	S	S	Abcd	60	1	30	4	S	S	4	S	S	50	3	25	4	R	60	60	4	4	S
5441	Jackson	4	S	S	Abcd	8	5	7	1	R	R	1	R	R	75	3	39	4	R	60	60	4	4	S
6878	[Landh x (M x H-J)] x And	1	R	S	ABCD*	4	T	2	1	R	R	1	R	R	1	0	1	1	R	5	5	1	1	R
7083	[Landh x (M x H-J)] x And	1	R	S	ABCD	6	0	3	1	R	S	4	S	S	1	T	1	1	R	60	60	1	1	R
7084	[Landh x (M x H-J)] x And	1	R	S	ABCD	6	0	3	1	R	S	4	S	S	1	T	1	1	R	60	60	1	1	R
6936	[Landh x (M x H-J)] x And	1	R	S	ABCD	6	T	3	1	R	R	1	R	R	1	T	1	1	R	2	2	1	1	R
6935	[Landh x (M x H-J)] x Cl	1	R	S	ABCD	6	T	3	1	R	R	1	R	R	1	T	1	1	R	60	60	1	1	R
6929	Logan	4	S	S	Abcd	20	T	10	1	R	R	1	R	R	50	20	35	4	R	95	95	4	4	S
7116	Marion x D69-Bond	1	R	S	ABCD	8	0	4	1	R	S	4	S	S	1	T	1	1	R	60	60	1	1	R
6765	Minland	1	R	S	ABCD	8	3	5	1	R	S	4	S	S	1	T	1	1	R	60	60	1	1	R
4988	Mo. O-205	4	S	S	Abcd	8	1	5	1	R	R	1	R	R	75	20	43	4	R	40	40	4	4	S
6934	Nem x (Clin x Boone-Cart)	4	S	S	Abcd	8	1	4	1	R	R	1	R	R	75	5	40	4	R	40	40	4	4	S
6642	Newton	4	S	S	Abcd	10	1	5	1	R	R	1	R	R	75	30	53	4	R	60	60	4	4	S
5927	Ransom	1	R	S	ABCD	6	0	3	1	R	R	1	R	R	1	0	1	1	R	2	2	1	1	R
5961	[Rx{VxH-B}] x [Ax{VxH-B}]	Het	Het	S	ABC*d	10	T	7	1	R	R	1	R	R	75	5	40	4	R	60	60	1	1	R
5962	[Rx{VxH-B}] x [Ax{VxH-B}]	1*	R	S	ABC*d	6	0	3	1	R	R	1	R	R	1	T	1	1	R	10	10	1*	1*	S
5946	Sauk	4	S	S	Abcd	8	1	4	1	R	R	1	R	R	85	10	48	4	R	20	20	4	4	S
6767	Simcoe (ck)	4	S	S	Abcd	6	1	3	1	R	R	1	R	R	90	5	48	4	R	20	20	4	4	S
5864	{Victoria x H-B} x Colo	1	R*	S	a*BC*D*	40	0	20	1*	R*	S*	4*	S*	S*	1	0	1	1*	R	31	31	1*	1*	R
6537	{Victoria x H-B} x Colo	1	R	S	ABCD	12	0	6	1	R	S	4	S	S	1	0	1	1	R	60	60	1	1	R
6608	{Victoria x H-B} x Colo	1	R	S	ABCD	12	T	6	1	R	S	4	S	S	1	0	1	1	R	60	60	1	1	R
6939	{Victoria x H-B} x Spooner	1	R	S	ABCD	12	0	6	1	R	S	4	S	S	1	T	1	1	R	40	40	1	1	R
5440	Waubay	4	S	S	Abcd	12	4	8	1	R	R	1	R	R	85	30	58	4	R	20	20	4	4	S

*Heterozygous. *Slightly heterozygous.

Table 21. Adult reaction in nursery to crown rust on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 8 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Manhattan Kansas	St. Paul Minn.	Columbia Mo.	Fargo N. D.	Brookings S. D.	Madison Wis.
Percent											
7084	[Landh x (M x H-J)] x And	.6	0	T	1	T	HR	1	T	2	T
6936	[Landh x (M x H-J)] x And	1.0	0	2	1	T	HR	2	T	2	T
6701	Clintland	1.0	0	T	5	T	HR	2	T	0	T
7083	[Landh x (M x H-J)] x And	1.4	0	2	1	T	HR	2	T	5	T
6916	Fayette	2.1	0	T	4	T	HR	2	10	T	T
6930	Bentland	2.4	0	T	7	1	HR	T	10	T	T
6878	[Landh x (M x H-J)] x And	2.8	0	10	3	1	HR	2	5	1	T
6935	[Landh x (M x H-J)] x Cl	2.8	0	5	1	T	HR	1	5	10	T
6913	(Bond-Rain x H-J) x Landh	3.7	0	15	5	T	HR	4	5	0	T
6765	Minland	3.9	6	4	2	1	HR	10	5	3	T
7116	Marion x D69-Bond	5.8	6	10	10	1	MS	8	5	3	3
6537	(Victoria x H-B) x Colo	10.0	50	4	10	2	MS	2	5	T	7
6752	Beedes	10.3	0	3	15	1	S	16	5	T	42
6767	Simcoe (ck)	10.4	24	4	15	1	S	8	10	1	20
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	10.5	0	14	18	4	HR-MS	16	10	8	14
6939	(Victoria x H-B) x Spooner	11.5	0	30	10	12	MR-MS	16	20	T	4
6608	(Victoria x H-B) x Colo	11.9	30	4	15	24	R-MS	4	T	T	18
6642	Newton	12.7	0	14	10	24	MS-S	16	25	T	12
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	13.6	0	14	15	12	MS	20	10	15	23
5946	Sauk	13.9	24	30	10	8	S	12	5	2	20
6934	Nem x (Clin x Boone-Cart)	13.9	0	40	15	12	MS	30	10	T	4
7030	Cl x [Vic x (Vic x H-B)]	16.3	0	60	7	4	S	16	10	8	3
5864	(Victoria x H-B) x Colo	16.8	4	30	25	32	HR	8	5	10	20
5927	Ransom	17.3	0	14	18	40	S	16	20	5	25
7020	Cl x [Vic x (Vic x H-B)]	18.1	1	60	7	18	S	24	20	10	5
6933	Clinton x (Boone-Cartier)	20.6	1	100	18	18	S	10	10	0	8
6644	Clinton ² x Ark. 674	22.3	0	15	18	64	HR	20	5	T	56
4988	Mo. O-205	23.9	8	40	15	8	MS-S	20	20	5	8
6927	(Boone-Cartier) x Clinton	25.0	0	60	25	56	S	30	20	0	9
6668	Clinton x (Boone-Cartier)	26.1	1	100	25	40	S	25	10	0	8
4170	Andrew (ck)	26.3	40	100	10	6	S	8	10	T	36
6929	Logan	29.0	40	100	10	12	S	4	30	15	21
6928	Benton x Marion	29.1	40	100	10	8	S	20	5	10	40
7117	D69-Bond x (V-R x Bannock)	32.3	24	100	10	64	S	16	30	T	14
5966	Andrew x Clinton	36.1	48	100	10	16	S	30	30	15	40
5440	Waubay	36.4	60	100	28	6	S	25	50	10	12
5647	Clarion	39.3	50	100	18	64	S	10	30	15	27
4259	Clinton 59 (ck)	42.3	60	100	25	72	S	30	10	10	32
5441	Jackson	45.9	60	100	25	72	S	30	40	5	35
2027	Gopher (ck)	46.0	60	100	28	72	S	30	40	10	28

Table 22. Percent of smut infection on stations reporting of varieties and selections in the Uniform North Central States Oat Smut Nursery grown in 1955.

C.I. No.	Variety or cross	Av. 10 N.C. Stations	Urbana Ill.	Lafayette Ind.	Anes Iowa	Manhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Wooster Ohio	Brookings S. D.	Madison Wis.
Percent												
6939	(Victoria x H-B) x Spooner	0.0	0	0	0	0	0	0	0	0	0	0
996	Navarro	0	0	0	0	0	0	0	0	0	0	0
6935	[Landh x (M x H-J)] x Cl	0	0	0	0	0	0	0	0	0	0	0
7083	[Landh x (M x H-J)] x And	0	0	0	0	0	0	0	0	0	0	0
7084	[Landh x (M x H-J)] x And	0	0	0	0	0	0	0	0	0	0	0
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	0.1	0	0	0	1	0	0	0	0	0	0
6608	(Victoria x H-B) x Colo	0.1	0	0	0	0	0	0	0	0	1	0
6933	Clinton x (Boone-Cartier)	0.2	0	0	0	0	0	0	1	0	0	0
2053	Markton	0.2	0	0	0	0	0	0	0	0	2	0
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	0.2	2	0	0	0	0	0	0	0	0	0
6936	[Landh x (M x H-J)] x And	0.3 ^{1/}	2	0	0	0	0	0	0	0	0	0
6927	(Boone-Cartier) x Clinton	0.3	0	0	3	0	0	0	0	0	0	0
6537	(Victoria x H-B) x Colo	0.4	0	0	0	1	0	0	0	0	0	3
7020	Cl x [Vic x (Vic x H-B)]	0.4	0	0	0	2	0	0	0	0	1	0
2965	Camas	0.4	0	0	0	0	0	4	0	0	0	0
5967	Andrew x Clinton	0.4	0	0	0	0	0	0	0	0	1	3
6752	Beesee	0.5	0	0	0	2	0	0	0	0	3	0
5864	(Victoria x H-B) x Colo	0.9	5	0	0	0	0	0	0	0	0	4
6913	(Bond-Rain x H-J) x Landh	1.0	0	0	0	6	0	0	0	0	1	3
6642	Newton	1.0	0	0	2	5	0	0	3	0	0	0
6930	Bentland	1.3	0	0	0	12	0	0	0	0	1	0
2925	Nicol	1.5	7	0	2	0	0	5	0	0	1	0
2401	Victoria	1.7	0	0	0	14	0	0	1	0	0	3
7117	D69-Bond x (V-R x Bannock)	1.9	1	0	0	0	0	15	0	0	3	0
4259	Clinton 59 (ck)	2.8	6	0	0	3	0	15	0	0	3	0
7116	Marion x D69-Bond	3.1	3	0	2	6	0	5	0	0	8	7
7030	Cl x [Vic x (Vic x H-B)]	5.8	3	0	11	3	0	29	1	0	1	10
6878	[Landh x (M x H-J)] x And	8.9	32	0	8	10	3	16	1	0	8	11
1877	Black Mesdag	9.3 ^{1/}	4	0	3	77	1	0	0	0	6	2
708	Fulghum	10.6 ^{1/}	1	0	2	92	0	0	0	0	0	0
1876	Monarch	11.7	0	0	1	99	0	0	3	0	13	0
2027	Gopher (ck)	19.5	32	8	22	72	6	19	1	0	31	4
1898	Gothland	26.9	87	5	17	86	2	16	3	0	48	5
560	Victory	29.0	88	0	34	78	6	32	1	0	46	6
3522	Landhafer	29.9	92	60	37	38	5	35	2	0	8	22
1878	Black Diamond	33.2	88	50	19	81	13	21	2	0	35	23
2143	Anthony	47.8	94	25	61	98	17	58	2	0	80	44

^{1/} Average for locations reporting.

Table 23. Varieties and selections of oats tested to all races of smut at Pullman, Washington, 1955.^{1/}

C.I. No.	Variety or cross	Race and percent infection																						
		A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11	A-12	A-13	A-14	A-15	K-1	K-2	K-3	K-4	K-5	K-6	K-7	
6765	Minland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6752	Beedee	0	0	0	0	0	0	0	0	1	0	0	0	0	71	66	0	0	0	0	0	0	75	
6939	R L 1273 x Spooner	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	0	25	
6642	Newton	6	6	0	3	2	12	0	0	0	10	2	0	0	95	90	9	0	6	0	0	0	95	
6930	Bentland	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	
6537	(Victoria x H-B) x Colo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	
5967	Andrew x Clinton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6908	(Arlington-Delair) x Trispermia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4639	Sala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

^{1/}Data supplied by Dr. C. S. Holton.

Table 24. Reaction to Septoria avenae on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Leaf infection				Leaf-Stem		Stem infection			
		Ames Iowa	Madison (Natural)	Wis. (Inoc.)	DeKalb Ill.	E. Lansing Mich.	Class2/ %	Class3/ %	DeKalb Ill.	Ames Iowa	Madison Wis.
		Average (4) 1/	%	%	%	%	%	%	%	%	%
6701	Clinton	20.5	25	32	2.5	2.5	1	1.5	2	2	5
6935	[Landh x (M x H-J)] x Cl	22.5	27	35	1.3	1.3	0+	2.3	1	1	8
4259	Clinton 59 (ck)	22.8	25	40	2.8	2.8	3	2.3	1	1	6
2027	Gopher (ck)	22.8	23	33	2.0	2.0	1	2.0	2	2	5
6767	Simcoe (ck)	23.5	20	32	2.0	2.0	2+	2.3	2	2	22
6668	Clinton x (Boone-Cartier)	23.8	23	36	1.0	1.0	2	1.8	1	1	28
6936	[Landh x (M x H-J)] x And	24.0	25	36	3.3	3.3	0+	2.8	1	1	25
7083	[Landh x (M x H-J)] x And	24.5	25	35	17.5	17.5	1	1.8	1	1	18
6752	Beedee	25.3	25	38	2.5	2.5	1	2.8	1	1	18
6644	Clinton ² x Ark. 674	25.8	20	38	3.8	3.8	2	2.3	1	1	22
6913	(Bond-Rain x H-J) x Landh	26.0	25	42	3.0	3.0	1	2.3	1	1	27
5966	Andrew x Clinton	27.5	25	40	3.3	3.3	2	2.8	3	3	15
6939	(Victoria x H-B) x Spooner	28.0	23	37	2.3	2.3	2	2.3	1	1	22
6608	(Victoria x H-B) x Colo	29.3	23	42	2.8	2.8	1	2.5	1	1	42
7020	Cl x [Vic x (Vic x H-B)]	29.8	20	32	4.0	4.0	1	3.0	2	2	37
7030	Cl x [Vic x (Vic x H-B)]	31.3	28	42	3.8	3.8	3	3.0	2	2	35
5441	Jackson	31.5	28	35	2.5	2.5	1	1.8	1	1	33
6537	(Victoria x H-B) x Colo	32.5	28	40	3.3	3.3	1+	2.5	2	2	42
5864	(Victoria x H-B) x Colo	32.8	25	44	2.5	2.5	2	2.5	2	2	42
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	32.8	22	31	2.0	2.0	3	3.0	2	2	48
7116	Marion x D69-Bond	33.0	22	37	2.8	2.8	2	3.0	1	1	53
6933	Clinton x (Boone-Cartier)	33.5	28	38	3.0	3.0	2	2.8	2	2	38
7117	D69-Bond x (V-R x Bannoek)	33.8	27	38	3.0	3.0	1	2.5	3	3	40
7084	[Landh x (M x H-J)] x And	33.8	30	38	3.0	3.0	2	1.8	2	2	38
5946	Sauk	33.8	30	35	2.5	2.5	2	2.8	1	1	45
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	34.8	25	31	2.0	2.0	3	3.0	1	1	53
4988	Mo. O-205	35.8	27	38	2.8	2.8	1	2.5	3	3	47
6934	Nem x (Clin x Boone-Cart)	36.0	25	36	2.8	2.8	1	2.8	2	2	53
6916	Fayette	36.0	35	39	4.0	4.0	1	3.0	1	1	50
6642	Newton	36.3	25	40	4.0	4.0	3	3.0	2	2	50
5440	Waubay	37.0	28	40	2.5	2.5	2+	3.0	3	3	50
4170	Andrew (ck)	38.0	30	38	3.8	3.8	3	3.0	2	2	52
6930	Bentland	38.5	30	51	2.8	2.8	3	2.8	1	1	43
6927	(Boone-Cartier) x Clinton	39.3	33	44	4.0	4.0	2	3.0	2	2	40
5927	Ransom	40.3	38	40	2.5	2.5	3	3.0	2	2	53
6765	Minland	41.0	43	51	2.3	2.3	1	2.8	2	2	40
6928	Benton x Marion	41.3	37	43	3.5	3.5	3	3.0	1	1	65
5647	Clarion	41.8	30	42	3.0	3.0	3	2.8	1	1	65
6878	[Landh x (M x H-J)] x And	42.3	35	42	3.0	3.0	1	2.8	2	2	62
6929	Logan	42.5	33	45	3.8	3.8	3	3.0	2	2	62

1/ Average of 3 percentage readings for leaf infection and one for stem infection.

2/ 0 = no infection, 1 = light, 2 = moderate, 3 = heavy, 4 = very heavy or total infection.

3/ 1 = small lesions or resistant reaction, 2 = intermediate, 3 = large lesions or susceptible reaction.

Table 25. Relative susceptibility and resistance of entries in the Uniform North Central Oat Nursery to two red-leaf virus isolates at Urbana, Illinois, and to natural infection at East Lansing, Michigan, in 1955.

C.I. No.	Variety or Cross	Urbana, Illinois				E. Lansing, Mich.			
		Isolate One ¹		Isolate Two ¹		Reaction			
		% reduct. in kernel No. 2/ weight ³ /	% reduct. in plant height ⁴ /	% reduct. in kernel No. 2/ weight ³ /	% reduct. in kernel height ⁴ /	class to natural infection ⁵ /	infection ⁵ /	class to natural infection ⁵ /	infection ⁵ /
4170	Andrew	77.2	45.4	72.6	26.1	2	27.5	2	2
5966	Andrew x Clinton	72.2	50.6	68.0	21.9	2	24.5	2	2
6752	Beedee	72.2	30.0	68.4	25.0	2	30.1	2	2
6930	Bentland	74.8	35.0	70.0	23.7	1+	30.0	1+	1+
6928	Benton x Marion	70.2	26.4	78.5	28.5	2	38.5	2	2
6913	(Bond-Rain x H-J) x Landh	84.6	43.0	39.9	17.2	2	15.5	2	2
6927	(Boone-Cartier) x Clinton	75.5	22.6	58.3	15.3	2	22.9	2	2
5647	Clarion	72.0	36.2	83.4	21.5	1+	39.4	1+	1+
6701	Clintonland	64.9	29.3	64.9	27.4	1+	24.9	1+	1+
4259	Clinton 59	84.7	19.0	73.4	15.8	1+	27.0	1+	1+
6644	Clinton ² x Ark. 674	26.9	35.9	67.4	31.2	2	23.1	2	2
6668	Clinton x (Boone-Cartier)	50.7	30.8	30.7	22.9	1+	22.2	1+	1+
6933	Clinton x (Boone-Cartier)	73.7	6.2	75.9	9.4	1+	29.6	1+	1+
7030	Cl x (Vic x (Vic x H-B))	64.7	22.3	—	—	1+	—	1+	1+
7020	Cl x (Vic x (Vic x H-B))	63.8	30.9	64.5	21.7	2	24.9	2	2
7117	D69-Bond x (V-R x Bannock)	84.3	15.9	76.9	31.1	2+	37.2	2+	2+
6916	Fayette	56.1	41.5	66.2	8.3	1+	26.2	1+	1+
2027	Gopher	67.0	3.2	79.6	9.8	1+	33.3	1+	1+
5441	Jackson	82.6	34.1	79.5	23.0	1+	31.6	1+	1+
6878	[Landh x (M x H-J)] x And	—	—	69.9	14.4	1+	29.5	1+	1+
7083	[Landh x (M x H-J)] x And	83.8	26.1	48.6	6.5	1+	26.2	1+	1+
7084	[Landh x (M x H-J)] x And	74.1	35.8	75.5	26.2	1+	32.6	1+	1+
6936	[Landh x (M x H-J)] x And	65.6	48.5	64.3	26.2	1+	—	1+	1+
6935	[Landh x (M x H-J)] x Cl	73.7	22.6	—	—	2	—	2	2
6929	Logan	82.3	35.1	26.0	35.6	1+	27.5	1+	1+
7116	Marion x D69-Bond	58.2	15.5	77.5	18.6	1+	41.1	1+	1+
6765	Minland	44.4	38.8	48.7	17.6	1+	28.5	1+	1+
4988	Mo. O-205	67.4	30.5	67.1	32.5	1+	25.4	1+	1+
6934	Nem x (Clin x Boone-Cart)	75.9	24.4	64.0	8.3	3	22.5	3	3
6642	Newton	65.3	21.9	65.2	18.4	2	19.3	2	2
5927	Ransom	50.3	28.8	61.9	11.6	1+	27.2	1+	1+
5961	[Rx(VxH-B)] x [Ax(VxH-B)]	52.9	17.3	54.3	25.9	1+	31.6	1+	1+
5962	[Rx(VxH-B)] x [Ax(VxH-B)]	73.6	23.7	55.9	33.2	1+	24.7	1+	1+
5946	Sauk	69.3	28.8	51.9	51.9	1+	27.1	1+	1+
6767	Simcoe	78.0	36.5	68.5	20.4	2	32.1	2	2
5864	(Victoria x H-B) x Colo	83.5	41.2	74.0	16.8	2	34.4	2	2
6537	(Victoria x H-B) x Colo	79.1	38.7	83.6	58.3	1+	38.0	1+	1+
6608	(Victoria x H-B) x Colo	75.8	39.5	82.0	49.2	2+	26.5	2+	2+
6939	(Victoria x H-B) x Spooner	70.0	45.8	—	—	1+	—	1+	1+
5440	Waubay	74.7	18.0	73.9	4.0	2	29.6	2	2
5440	Waubay	74.7	41.0	78.6	1.9	2	29.3	2	2

¹/Both virus isolates used in these trials were obtained from Illinois.

²/Based on total no. of kernels obtained from 5 red-leaf affected panicles and 5 apparently virus-free panicles.

³/Based on wt. in gms/100 kernels selected at random from 5 red-leaf affected oat panicles and 5 apparently virus-free panicles.

⁴/Based on ht. of 5 red-leaf affected oat plants and 5 apparently virus-free plants.

⁵/ 1 = no infection, 5 = total infection.

NORTHWESTERN REGION

Heavier and/or later than normal precipitation in parts of the Northwestern region delayed planting at some stations sufficiently to be reflected in lower than average yields. Late seeding, especially if following a cool, wet spring, results in shorter plants and less than average lodging. This was evident on some of the irrigated stations in this region in 1955. Yields in eastern Wyoming and northern Colorado were much higher than those for 1954 even though they were possibly below average for this area.

Both stem and crown rust infections were reported in eastern Montana and stem rust in northern Montana. Stem rust appeared very late in southeastern Idaho in 1955. No smut infection of any consequence was observed or reported on oats in 1955. A considerably increased amount of leaf damage was present on oat nurseries this season. The two most prevalent symptoms were red leaves and a considerable amount of yellowing of the leaves previous to ripening. A material increase in the number of aphids was observed on oats in some nurseries and on some farms. Garry appears to be one of the varieties most susceptible to aphid damage. California yellow-dwarf-virus was found in most parts of the region. The amount of this disease was so low that only to the west of the Cascade Mountains in northern Oregon and Washington was infection sufficiently heavy to have possibly caused damage. Most of the damage to oat plants appeared to have resulted from attacks by the aphids and not from any virus infection they may have transmitted.

The nurseries at Tetonia, Idaho and Havre, Montana were damaged by hail. The damage at Tetonia came late in the growing season and that test had to be abandoned. Frost in the lower Klamath area at Klamath Falls, Oregon, damaged the crop in late spring and early summer.

Although only one set of oat entries is grown in uniform regional experiments in the Northwest Region, data from irrigated and non-irrigated stations are summarized separately in this report.

Uniform Irrigated Stations

The Uniform Northwestern States Oat Nursery was seeded on 13 stations in 1955 where it was grown under irrigation. The test was planted for the first time at Sidney, Montana and Mesa, Arizona. The cooperating stations were:

Mont. - Sidney	Utah - Logan
Bozeman	Ariz. - Mesa
Wyo. - Laramie	Wash. - Prosser
Colo. - Fort Collins	Ore. - Union
Hesperus	Ontario
Idaho - Aberdeen	Klamath Falls
	Lower Klamath Falls

Among the 35 entries included in 1955 four were check varieties; seven were of Canadian origin; thirteen from the North Central region; one from the Northeastern region; and twelve from the Northwestern region. The five check varieties were Ajax, Markton, Victory, Simcoe, and Clinton 59. The latter is the "stiff straw" check. The selections from the crosses (Victoria x Richland) x Bannock, Clinton x Overland² and C.I. 4189 x Overland are the result of cooperative efforts of the U.S.D.A. and different cooperating state stations.

Conditions for growing the nursery at Lower Klamath, as mentioned in a former report, have been improved by use of sprinkler irrigation and the application of minor elements. The 1955 nursery in that area was damaged by frosts that occurred early in the season. The yields produced, even though variable, were included in calculating regional averages. A list of entries included in this nursery is presented in Table 26 and summary data from irrigated stations in Table 27. Individual station reports are presented in Tables 28 to 33 inclusive. Miscellaneous data are included in Table 32. As only two reports on lodging in tests under irrigation were received these data were included with those from non-irrigated tests presented in Table 37.

Yield, Bushels per Acre

Yield data were obtained from 13 stations on irrigated land in 1955. The lowest yields were produced at Union and the highest at Logan where average yields of all entries were 72.7 and 160.4 bushels per acre, respectively. The average yields of all entries at 8 stations exceeded 100 bushels per acre. The average yields in 1955 were below those of both 1953 and 1954. Calculated differences needed for significance at the 5% level at Hesperus and Aberdeen were 12.4 and 20.6 bushels per acre, respectively. This indicates to some degree the large amount of variation in tests in 1955. The check varieties Markton, Ajax, Simcoe, Victory and Clinton produced average yields of 122.2, 116.1, 112.9, 110.5 and 89.1 bushels per acre, respectively. Markton averaged second in yield; only C.I. 3865 producing more. The Clinton 59 stiff straw check was the lowest yielder in the test. The 12 early mid-western oats were in the low yielding group. Winema was the only western oat among the 13 lowest producing entries. The five highest yielding entries were C.I. 3865, Markton, Cody, Park and Shasta ranked in that order.

Test Weight

Data on weight per bushel were reported from 12 stations in 1955. Oats were heaviest at Bozeman where the average for all entries was 41.4 pounds per bushel. Logan was the only other station where average test weights exceeded 40 pounds per bushel. The lowest average test weights were reported from Laramie where the average for all entries was only 34.6 pounds. Waubay, Jackson, Rodney, and Shelby were the 4 heaviest testing oats, averaging 40.6, 39.4, 39.0 and 38.8 pounds per bushel, respectively. Landhafer x (Mindoo x H-J), C.I. 6765 was the lightest testing entry, averaging only 33.7 pounds per bushel. The 5 check varieties Victory, Simcoe, Ajax, Clinton 59 and Markton had average test weights ranging from 38.6 to 37.1 pounds per bushel.

Data on great percentage of some of the entries grown at Aberdeen, Idaho in the Northwest nurseries appear in Table 13.

Plant Height

Data on plant height were received from 10 stations in 1955. The average height of the entries grown in 1955 was close to that for 1954 but shorter than for 1953. Oats grew tallest at Mesa where the average height of all entries was 50 inches and were shortest at Laramie where the average of all entries was 30 inches. At most of the stations oats were shorter than average. The Canadian oats of promise for this area, namely, Rodney, Improved Garry, Exeter, Simcoe and Fortune are all taller than those varieties now most widely grown in the area. Shasta, recently released in Oregon and Washington, however, is an exception being a very tall oat. Shasta which averaged 45.6 inches in height in 1955 was the tallest entry in the test. The Clinton x Overland² selections, namely C.I. 5345, C.I. 5346 and Park and the Canadian oats, Rodney and Improved Garry, even though taller than Cody and Overland, have stiff straw.

Standing Ability

Two stations, namely Hesperus and Ontario, reported lodging in 1955 and then only in the very weakest strawed varieties. Markton lodged 2.0 percent at Hesperus and 30.0 percent at Ontario.

Date Headed

Eleven of the 13 stations growing the nursery in 1955 reported on date of heading although data from only 10 stations were used in the averages. Oats headed latest at the Klamath Falls station where the average heading date of all entries was July 28. Oats headed earliest at Mesa where the average heading date of all entries was April 29. Oats were seeded in the fall or in November at Mesa. Among stations where oats are spring sown, oats headed first at Ontario where the average heading date was June 11. None of the early heading oats from the North Central region produced relatively high yields. All are apparently too early to be satisfactory for this area.

Date Ripe

Data on date ripe were reported from Hesperus, Mesa and Prosser. Bozeman reported date of harvest of all entries. There is a fair degree of correlation between date ripe and date of heading.

Reaction to Disease

Percent of stem rust on all entries was recorded at Sidney and degree of resistance was recorded at Havre. Data on the percent of crown rust infection recorded at Sidney suggests a race pattern that may be confusing.

Table 26. Entries included in the Uniform Northwestern States Nursery grown in 1955.

Variety	C.I. No.	Source	Origin
Ajax (ck)	4157	Victory x Hajira	Winnipeg, Canada
Andrew	4170	Bond x Rainbow	Minnesota
Andrew x Clinton	5657	Andrew x Clinton	USDA, Idaho
Andrew x Clinton	5658	Andrew x Clinton	USDA, Idaho
Bannock	2592	Markton x Victory	USDA, Idaho
(B-A) x (Iogold x V-R)	6612	(Bond x Anthony) x (Iogold x Victoria-Richland)	USDA, Idaho
C.I. 4189 x Overland	5347	(Bond x Anthony) x Overland	USDA, Idaho
C.I. 4189 x Overland	6613	(Bond x Anthony) x Overland	USDA, Idaho
Clarion	5647	Clinton x Marion	Maine, USDA, Iowa
Clintafe	5869	Clinton x Santa Fe	Iowa, USDA
Clintonland	6701	Clinton ⁴ x Landhafer	Indiana, USDA
Clinton 59 (ck)	4259	D69 x Bond (M3218-35-1335-3-10)	Iowa, USDA, Ind.
Clinton x Overland ²	5345	Clinton x Overland ²	USDA, Idaho
Clinton x Overland ²	5346	Clinton x Overland ²	USDA, Idaho
Cody	3916	(Victoria x Richland) x Bannock	USDA, Idaho, Wyo., and Wash.
Craig	5332	Ithacan x Victoria	New York
Exeter	4158	Victory x Rusota	Winnipeg, Canada
Fortune	5226	Victory x (Victoria-Richland x Bannock)	Saskatchewan, Canada
Garry	6648	Victory x (Victoria x Hajira-Banner) R.L. 1692.27	Winnipeg, Canada
Improved Garry	6662	Victory x (Victoria x Hajira-Banner)	Winnipeg, Canada
Jackson	5441	Clinton x Marion	USDA, Iowa, Michigan
Markton (ck)	2053	Selection from C.I. Intro. from Turkey	USDA, Oregon
Minland	6765	Landhafer x (Mindo x Hajira-Joanette) Minn. II-46-3	Minnesota
Overland	4181	(Victoria x Richland) x Bannock	USDA, Idaho
Park	6611	(Clinton x Overland) x Overland	USDA, Idaho, Montana
Rodney	6661	(Victoria x Hajira-Banner) x Roxton	Winnipeg, Canada
Sauk	5946	(Forward x Victoria-Richland) x Andrew	Wisconsin
Shasta	3976	Markton x Victory (Sel. 2599-4) Montana	USDA, Oregon
Shelby	4372	Anthony x Bond	USDA, Iowa
Simcoe (ck)	6767	Ajax x Erban	Guelph, Canada
(Vict. x Haj.-Banner) x Colo	6537	(Victoria x Hajira-Banner) x Colo (Iowa Sel. 49-2166)	Iowa, USDA
(V-R) x Bannock	3865	(Victoria x Richland) x Bannock	USDA, Idaho
Victory (ck)	1145	Selection from Milton	Svalof, Sweden
Waubay	5440	Clinton x Marion	USDA, Iowa, South Dakota
Winema	4373	Magistral x Richland XS1104	USDA, Iowa, Oregon

Table 27. Summary data obtained on the Uniform Northwestern States Nursery grown on Irrigated stations in 1955.

Rank in yield	C.I. No.	Variety or selection	1955 Acre yield (13 stations) bushels	Bushel weight (12 stations) pounds	Plant height (10 stations) inches	Date head (10 stations)
1	3865	(V-R) x Bannock	129.3	36.7	35.6	7/5
2	2053	Markton (ok)	122.2	37.5	42.7	5
3	3916	Cody	121.7	37.3	32.8	6
4	6611	Park	121.2	37.4	38.2	7
5	3976	Shasta	121.1	37.1	45.8	9
6	5346	Clinton x Overland ²	120.9	37.4	38.0	7
7	2592	Bannock	120.5	38.7	42.5	8
8	6661	Rodney	118.7	39.0	41.0	8
9	5226	Fortune	118.5	37.2	43.6	6
10	4158	Exeter	118.1	37.7	41.8	10
11	5345	Clinton x Overland ²	117.7	37.5	38.1	7
12	5347	C.I. 4189 x Overland	117.3	37.4	38.8	6
13	6612	(B-A) x (Iogold x V-R)	117.0	36.8	34.3	4
14	6613	C.I. 4189 x Overland	116.9	37.2	38.7	7
15	5332	Craig	116.5	36.8	33.5	3
16	4157	Ajax (ok)	116.1	37.9	42.5	4
17	6662	Improved Garry	113.4	37.8	41.8	5
18	5946	Sauk	113.2	37.3	38.7	4
19	6767	Simcoe (ok)	112.9	37.9	42.3	6
20	4181	Overland	111.7	37.1	34.5	4
21	6648	Garry	111.3	38.1	41.7	6
22	1145	Victory (ok)	110.5	38.6	44.2	10
23	5658	Andrew x Clinton	110.0	36.8	38.5	1
24	4372	Shelby	109.5	38.8	39.6	4
25	5657	Andrew x Clinton	108.9	36.6	35.6	6/29
26	4373	Winema	107.5	36.1	31.4	7/2
27	6537	(Victoria x H-B) x Colo	107.4	38.7	36.9	6/28
28	5441	Jackson	105.9	39.4	38.3	7/2
29	5647	Clarion	99.9	37.6	36.9	6/30
30	4170	Andrew	99.8	37.2	37.4	27
31	5869	Clintafe	99.6	37.1	37.3	7/2
32	6765	Minland	96.4	33.7	37.3	6/27
33	5440	Waubay	96.1	40.6	37.0	7/1
34	6701	Clintland	89.9	37.4	34.8	6/29
35	4259	Clinton 59 (ok)	89.1	37.1	35.7	30

Table 28. Yield of oats included in the Uniform Northwestern States Nursery grown on Irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 13 Stations	Rank 13 Stations	Idaho	Montana	Bozeman	Laramie	Fort Collins	Heppner	Abidjan	Logan	Utah	Mea Arizona	Prosser	Washington	Ontario	Union Oregon	Klamath Falls Oregon	Lower Klamath Oregon
Bushels per acre																			
2053	Markton (ok)	122.2	2	93.0	107.1	107.1	79.9	86.2	108.1	128.4	199.4	172.0	172.0	172.6	148.0	148.0	94.3	97.8	101.8
3916	Cody	121.7	3	114.3	102.8	102.8	90.6	81.0	130.5	136.0	173.1	200.0	200.0	135.1	154.8	154.8	71.2	85.8	106.4
2592	Bannock (ok)	120.5	7	115.5	93.0	93.0	89.6	93.6	123.6	147.6	165.8	157.0	157.0	135.3	142.2	142.2	100.1	100.8	102.7
1145	Victory	110.5	22	96.9	96.9	96.9	97.2	86.5	103.6	147.4	173.1	125.0	125.0	134.8	139.2	139.2	75.1	72.5	88.8
4181	Overland	111.7	20	111.1	80.8	80.8	78.6	80.2	108.5	137.1	164.7	175.0	175.0	123.4	140.6	140.6	66.4	66.0	119.2
3865	(V-R) x Bannock	129.3	1	129.5	118.7	118.7	66.9	77.3	133.9	131.4	177.8	186.0	186.0	165.0	161.6	161.6	85.3	139.8	107.2
4372	Shelby	109.5	24	104.6	92.3	92.3	74.4	88.9	90.7	134.6	155.7	146.0	146.0	139.0	121.6	121.6	78.4	76.3	116.5
4170	Andrew (ok)	99.8	30	106.6	70.2	70.2	62.3	91.2	100.7	118.0	142.2	175.0	175.0	108.7	106.6	106.6	58.5	80.4	82.4
4157	Ajax (ok)	116.1	16	108.3	109.6	109.6	73.3	87.7	109.4	139.7	181.7	155.0	155.0	138.6	127.6	127.6	57.1	89.6	132.3
5226	Fortune	118.5	9	108.7	92.9	92.9	79.6	103.3	122.6	144.2	186.6	174.0	174.0	157.1	131.8	131.8	78.1	81.1	80.6
5345	Clinton x Overland ²	117.7	11	109.8	88.7	88.7	73.6	93.2	112.0	135.2	166.3	166.3	166.3	149.5	141.4	141.4	85.5	84.1	124.6
5346	Clinton x Overland ²	120.9	6	118.4	96.9	96.9	98.7	100.4	115.5	141.2	172.9	157.0	157.0	135.3	137.8	137.8	78.9	91.2	127.4
5347	C.I. 4189 x Overland	117.3	12	107.4	109.5	109.5	79.1	86.8	116.1	140.5	157.3	167.5	167.5	149.3	148.8	148.8	67.0	104.0	109.4
5657	Andrew x Clinton	108.9	25	116.1	92.4	92.4	78.1	94.6	102.4	130.0	141.4	160.0	160.0	106.3	139.2	139.2	55.4	79.8	120.5
5658	Andrew x Clinton	110.0	23	108.1	92.2	92.2	73.1	101.3	109.9	155.8	147.0	157.0	157.0	116.2	132.0	132.0	83.2	71.6	82.4
6611	Park	121.2	4	116.4	100.0	100.0	86.9	96.4	123.4	123.1	164.7	178.0	178.0	133.0	158.4	158.4	57.9	97.6	140.2
6612	(B-A) x (Iogold x V-R)	117.0	13	105.1	93.0	93.0	87.0	101.9	109.1	133.2	180.8	169.0	169.0	122.8	133.4	133.4	70.2	95.9	119.5
6613	C.I. 4189 x Overland	116.9	14	103.7	99.2	99.2	82.9	106.3	110.5	147.0	141.0	151.0	151.0	132.2	156.2	156.2	81.0	104.4	104.4
5441	Jackson	105.9	28	107.7	93.5	93.5	68.5	80.2	109.5	116.3	163.0	134.0	134.0	125.7	135.4	135.4	76.4	93.3	73.4
5869	Clintare	99.6	31	105.7	99.8	99.8	66.4	79.3	92.8	116.5	139.2	134.0	134.0	109.5	121.2	121.2	59.6	81.1	89.4
3976	Shasta	121.1	5	92.7	102.6	102.6	100.5	87.5	106.9	140.9	190.4	156.0	156.0	171.0	144.0	144.0	82.0	95.0	105.3
4158	Exeter	118.1	10	112.2	92.6	92.6	88.1	74.6	111.3	158.4	163.0	138.0	138.0	158.4	143.0	143.0	78.7	113.4	103.2
5332	Craig	116.5	15	104.3	93.8	93.8	76.9	116.4	120.0	142.2	167.3	178.0	178.0	126.6	146.2	146.2	69.3	78.1	93.1
5647	Clarion	99.9	29	102.0	81.1	81.1	81.4	87.6	83.1	115.9	145.5	143.5	143.5	104.4	120.2	120.2	61.5	96.0	76.4
5946	Sauk	113.2	18	115.4	75.0	75.0	71.1	104.5	116.7	128.2	168.0	174.0	174.0	124.6	124.4	124.4	74.4	82.1	113.4
6661	Rodney	118.7	8	129.7	78.7	78.7	74.2	91.2	109.0	154.1	185.9	159.0	159.0	160.8	143.4	143.4	77.8	96.7	83.2
6701	Clintland	89.9	34	86.6	80.0	80.0	52.4	53.2	78.9	112.7	134.5	142.0	142.0	104.9	115.6	115.6	74.0	58.3	75.7
5440	Waubay	96.1	33	94.5	93.5	93.5	63.3	86.9	86.5	114.4	146.8	131.0	131.0	101.3	116.6	116.6	58.8	56.1	99.3
6767	Simcoe (ok)	112.9	19	123.6	101.8	101.8	76.2	86.4	118.8	138.4	156.0	161.0	161.0	131.3	135.6	135.6	73.9	86.2	78.9
6662	Improved Garry	113.4	17	113.9	100.7	100.7	91.9	86.3	114.6	142.0	148.9	140.0	140.0	138.9	131.0	131.0	89.4	87.9	89.0
4373	Winema	107.5	26	111.1	108.4	108.4	63.5	94.2	114.3	116.2	149.3	153.0	153.0	119.7	125.8	125.8	71.7	82.3	88.1
6537	(Victoria x H-B) x Colo	107.4	27	112.9	73.5	73.5	71.9	78.4	87.9	137.5	157.5	175.0	175.0	121.2	120.8	120.8	72.6	87.3	100.2
6648	Garry	111.3	21	114.0	114.6	114.6	80.5	87.0	113.2	135.5	162.4	143.0	143.0	116.7	126.8	126.8	66.3	101.2	85.4
6765	Minland	96.4	32	106.4	73.8	73.8	66.4	75.5	99.1	103.8	120.0	169.0	169.0	95.5	106.6	106.6	47.9	76.8	112.2
4259	Clinton 59 (ok)	89.1	35	91.2	78.8	78.8	67.7	55.7	64.4	115.3	125.1	132.9	132.9	110.3	109.6	109.6	67.1	66.5	73.4
	Station average			108.5	94.6	94.6	77.5	88.0	107.3	133.1	160.4	158.1	158.1	130.7	133.9	133.9	72.7	87.3	100.2

*Calculated yield.

Table 29. Test weight of oats included in the Uniform Northwestern States Nursery grown on Irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 12 Stations	Sidney Montana	Bozeman Montana	Laramie Wyoming	Fort Collins Colorado	Hesperus Colorado	Aberdeen Idaho	Logan Utah	Mesa Arizona	Prosser Washington	Ontario Oregon	Klamath Falls Oregon	Lower Klamath Oregon
								Pounds						
5440	Waubay	40.6	36.7	43.7	35.3	38.1	39.0	37.0	41.5	36.0	38.0	38.7	33.0	34.4
5441	Jackson	39.4	40.7	43.7	35.5	39.7	40.7	38.0	42.0	36.0	41.1	41.0	36.0	38.2
6661	Rodney	39.0	39.7	43.0	31.8	38.9	41.4	39.0	43.0	38.0	39.9	39.1	38.0	36.8
4372	Shelby	38.8	39.3	42.9	35.8	39.3	39.8	38.0	41.0	40.0	39.9	39.5	34.0	37.0
2592	Bannock	38.7	39.8	43.2	35.3	37.5	40.2	38.0	41.0	38.0	37.8	40.0	36.0	38.0
6537	(Victoria x H-B) x Colo	38.7	39.0	42.3	35.5	39.4	41.1	36.5	43.5	36.0	38.5	38.0	37.0	37.4
1145	Victory (ok)	38.6	38.7	42.6	34.8	38.5	42.3	38.0	41.0	36.0	39.3	39.5	37.0	36.4
6648	Garry	38.1	37.7	42.4	36.0	37.1	40.4	39.5	42.0	35.0	37.4	37.5	37.0	35.0
4157	Ajax (ok)	37.9	37.7	41.5	35.8	34.8	39.2	37.0	40.0	36.0	38.8	39.8	36.0	38.2
6767	Simcoe (ok)	37.9	34.8	41.7	34.0	35.0	41.1	37.5	40.5	37.0	38.2	40.4	37.0	37.4
6662	Improved Garry	37.8	38.7	42.5	35.0	35.9	40.6	37.5	40.0	36.0	37.5	37.7	37.0	35.2
4158	Exeter	37.7	37.5	41.4	35.8	35.7	40.7	37.5	37.5	37.0	38.7	39.1	36.0	35.8
5647	Clarion	37.6	38.2	40.9	34.8	37.7	38.6	38.0	41.5	36.0*	37.3	39.0	34.0	35.6
2053	Markton (ok)	37.5	37.8	40.8	33.8	38.3	39.2	38.0	39.5	38.0	38.0	39.0	34.0	34.2
5345	Clinton x Overland ²	37.5	37.5	41.7	34.8	37.8	40.0	38.0	40.0	36.0*	36.2	37.5	35.0	35.4
5346	Clinton x Overland ²	37.4	38.0	42.5	35.8	36.3	40.0	37.5	39.5	33.0	35.1	38.9	35.0	37.4
5347	C.I. 4189 x Overland	37.4	36.2	41.3	35.0	37.7	39.5	37.5	38.5	36.0*	37.3	39.0	37.0	34.4
6611	Park	37.4	37.8	42.1	34.9	35.6	40.5	37.5	40.5	35.0	36.8	37.9	34.0	36.8
6701	Clintland	37.4	37.0	41.6	32.8	38.6	38.8	37.5	40.5	35.0	38.6	38.0	35.0	36.2
3916	Cody	37.3	37.8	41.6	36.3	33.8	38.5	37.0	40.0	37.0	36.8	39.1	34.0	35.8
5946	Sauk	37.3	38.5	41.3	35.5	34.0	39.2	38.0	39.5	34.0	37.6	38.7	36.0	35.4
4170	Andrew	37.2	35.2	40.1	34.0	36.8	38.1	37.5	43.5	36.0	36.8	36.4	35.0	37.2
5226	Fortune	37.2	35.8	40.8	35.8	35.6	39.1	37.0	39.0	35.0	37.3	38.8	36.0	36.0
6613	C.I. 4189 x Overland	37.2	35.3	40.7	35.5	33.8	38.1	37.5	41.0	36.0	37.0	38.7	37.0	35.6
4181	Overland	37.1	37.7	41.3	34.3	34.6	38.7	37.5	38.0	38.0	34.9	38.6	36.0	35.8
5869	Clintafe	37.1	35.8	41.3	34.0	36.2	38.0	38.5	40.5	36.0	36.7	39.0	33.0	36.2
3976	Shasta	37.1	37.2	40.5	34.0	39.7	39.7	36.5	36.5	35.0	37.6	38.7	35.0	35.6
4259	Clinton 59 (ok)	37.1	37.0*	41.0*	34.0	37.0	38.1	33.5	41.5	35.5*	38.7	39.0	35.0	34.8
5658	Andrew x Clinton	36.8	37.0	40.5	34.8	36.1	39.1	36.5	39.5	35.0	36.5	38.5	35.0	33.6
6612	(B-A) x (Iogold x V-R)	36.8	37.0	41.0	34.0	34.1	39.2	39.5	39.0	36.0	35.2	38.2	34.0	35.0
5332	Craig	36.8	37.2	41.0	34.0	32.2	39.3	39.0	39.0	34.0	35.5	38.3	36.0	36.6
3865	(V-R) x Bannock	36.7	36.5	40.8	34.3	33.5	37.5	36.0	38.5	37.0	37.0	38.9	34.0	36.4
5657	Andrew x Clinton	36.6	35.7	39.1	34.5	33.2	37.4	37.0	39.5	33.0	36.4	38.3	40.0	35.8
4373	Winema	36.1	35.0	39.7	34.0	33.9	36.7	37.5	38.0	34.0	35.5	35.9	36.0	37.8
6765	Minland	33.7	34.8	36.7	30.0	37.8	33.8	36.5	39.0	31.0	32.1	31.6	30.0	31.0
	Station average		37.3	41.4	34.6	36.4	39.2	37.5	40.1	35.8	37.3	38.5	35.4	35.9

*Calculated test weight.

Table 30. Plant height of oats included in the Uniform Northwestern States Nursery grown on Irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average Stations 10	Sidney Montana	Bozeman Montana	Laramie Wyoming	Fort Collins Colorado	Hesperus Colorado	Aberdeen Idaho	Logan Utah	Mesa Arizona	Prosser Washington	Ontario Oregon
Inches												
4373	Winema	31.4	30	33	23	29	23	34	33	44	32	33
3916	Cody	32.8	31	31	26	28	26	36	35	45	34	36
5332	Craig	33.5	34	33	23	29	27	37	36	47	33	36
6612	(B-A) x (Iogold x V-R)	34.3	34	33	27	31	26	38	37	46	35	36
4181	Overland	34.5	33	32	26	32	26	38	37	47	36	38
6701	Clintonland	34.8	34	34	29	31	30	39	36	45	33	37
5657	Andrew x Clinton	35.6	37	34	29	32	28	39	37	47	35	38
3865	(V-R) x Bannock	35.6	36	29	28	32	31	37	40	47	36	40
4259	Clinton 59 (ok)	35.7	36°	35°	30	32	28	36	35	46°	33	36
5647	Clarion	36.9	37	37	31	31	30	40	38	48°	35	40
6537	(Victoria x H-B) x Colo	36.9	37	37	29	34	29	40	38	49	37	39
5440	Waubay	37.0	38	39	30	32	30	39	39	48	36	39
5869	Clintafe	37.3	38	40	29	34	29	40	38	47	38	40
6765	Minland	37.3	39	39	29	35	30	40	38	49	34	40
4170	Andrew	37.4	39	36	28	36	31	40	38	50	36	40
5346	Clinton x Overland ²	38.0	37	36	31	35	32	41	40	50	38	40
5345	Clinton x Overland ²	38.1	39	36	29	35	31	41	41	49°	38	41
6611	Park	38.2	38	38	32	34	32	39	40	50	37	42
5441	Jackson	38.3	37	39	31	36	31	41	41	51	35	41
5658	Andrew x Clinton	38.5	39	40	30	38	32	41	39	48	37	41
6613	C.I. 4189 x Overland	38.7	39	40	29	34	29	43	41	50	41	41
5946	Sauk	38.7	41	38	30	35	33	42	41	50	37	40
5347	C.I. 4189 x Overland	38.8	40	38	30	36	31	42	40	50°	40	41
4372	Shelby	39.6	39	41	31	35	32	43	42	52	41	40
6661	Rodney	41.0	43	39	32	37	34	44	43	53	42	43
6648	Garry	41.7	44	42	33	38	34	44	45	53	43	41
4158	Exeter	41.8	43	40	36	37	38	43	44	53	41	43
6662	Improved Garry	41.8	43	40	35	37	35	45	45	54	43	43
6767	Simcoe (ok)	42.3	46	44	34	38	35	45	45	53	41	42
2592	Bannock	42.5	45	43	33	36	36	43	45	55	45	44
4157	Ajax (ok)	42.5	42	44	33	39	36	45	45	54	43	44
2053	Markton (ok)	42.7	47	44	33	38	34	44	45	55	48	45
5226	Fortune	43.6	47	43	33	41	37	44	47	55	45	44
1145	Victory (ok)	44.2	47	45	29	39	40	47	48	56	46	45
3976	Shasta	45.8	47	45	39	41	38	46	48	57	51	46
Station average			39	38	30	35	31	41	40	50	39	40

*Calculated plant height.

Table 31. Percent of lodging of oats included in the Uniform Northwestern Nursery grown on Irrigated and on Non-irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 7 Stations	Hesperus Colorado	Ontario Oregon	Creston Montana	Sandpoint Idaho	Pullman Washington	Pendleton Oregon	Corvallis Oregon
Percent									
6613	C.I. 4189 x Overland	0.9	0	0.0	0	0	0	5	1
5346	Clinton x Overland ²	1.1	0	0.0	0	0	0	5	3
6611	Park	1.1	0	0.0	0	0	0	5	3
4373	Winema	1.3	0	0.0	0	0	0	5	4
5345	Clinton x Overland ²	1.4	0	0.0	0	1	0	5	4
6612	(B-A) x (Iogold x V-R)	1.4	0	0.0	0	0	0	5	5
5869	Clintafe	1.4	0	0.0	0	0	0	5	5
5647	Clarion	1.4	0	0.0	0	0	0	6	4
5440	Waubay	1.4	0	0.0	0	1	0	5	4
6661	Rodney	1.6	0	0.0	0	1	0	5	5
5657	Andrew x Clinton	1.9	0	0.0	0	1	0	6	6
6648	Garry	1.9	0	0.0	0	1	0	5	7
3916	Cody	2.0	6	0.0	0	0	0	6	2
5332	Craig	2.0	0	0.0	0	0	0	5	9
6662	Improved Garry	2.0	0	0.0	0	1	0	6	7
6701	Clintland	2.1	0	0.0	0	1	0	9	5
4259	Clinton 59 (ok)	2.3	0	0.0	0	0	0	9	7
5347	C.I. 4189 x Overland	2.4	0	0.0	0	5	0	6	6
5946	Sauk	2.9	0	0.0	0	5	0	10	5
6765	Minland	3.0	0	0.0	0	10	0	5	12
4372	Shelby	3.3	0	0.0	2	5	0	11	5
3865	(V-R) x Bannock	3.6	2	2.0	10	0	0	5	8
5658	Andrew x Clinton	3.6	0	0.0	0	10	0	8	7
4158	Exeter	3.8	2	0.5	0	5	0	12	7
4170	Andrew	3.9	0	0.0	3	10	2	5	7
2592	Bannock	4.5	4	0.5	3	10	0	8	6
5226	Fortune	5.4	0	0.5	0	20	0	9	8
5441	Jackson	6.0	0	0.0	0	20	0	10	12
4181	Overland	7.1	0	0.0	42	1	0	5	2
3976	Shasta	8.0	4	0.0	35	5	0	8	4
6767	Simcoe (ok)	9.0	0	0.0	3	40	0	9	11
1145	Victory (ok)	9.1	2	0.5	33	10	0	12	6
6537	(Victoria x H-B) x Colo	10.1	0	0.0	5	50	0	6	10
4157	Ajax (ok)	13.4	2	0.0	12	50	2	12	18
2053	Markton (ok)	20.3	2	30.0	32	60	0	9	9
Station average		"	0.7	1.0	5.1	9.2	0.1	7.1	6.4

Table 32. Date of heading of oats included in the Uniform Northwestern States Nursery grown on irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 10 Stations	Bozeman	Montana	Laramie	Wyoming	Fort Collins	Hesperus	Aberdeen	Idaho	Logan	Mesa	Prosser	Washington	Oregon	Klamath Falls	Oregon	Lower Klamath
4170	Andrew	6/27	7/17	7/4	6/19	6/24	6/24	6/24	6/24	6/24	6/17	4/19	6/9	6/6	7/20	7/8		
6765	Minland	27	16	5	20	23	23	23	23	23	17	18	13	5	18	6		
6537	(Victoria x H-B) x Colo	28	18	6	22	25	25	25	24	24	18	21	9	7	22	10		
5657	Andrew x Clinton	29	18	8	20	27	27	27	27	27	19	24	10	10	21	14		
6701	Clinton	29	18	7	19	26	26	26	25	25	19	21	9	7	21	15		
5647	Clarion	30	16*	10	30	26	26	26	26	26	19		10	10	21	15		
4259	Clinton 59 (ck)	30	16*	9	23	27	27	27	27	27	19	21	10	9	21	17		
5658	Andrew x Clinton	7/1	18	9	20	28	28	28	27	27	20	24	12	10	25	18		
5440	Waubay	1	20	10	20	27	27	27	26	26	20	27	11	10	24	21		
5869	Clintafe	2	22	9	24	30	30	30	29	29	20	27	12	11	25	22		
5441	Jackson	2	20	10	23	29	29	29	29	29	21	5/1	11	11	25	20		
4373	Winema	2	20	8	25	29	29	29	27	27	21	4/28	12	17	27	19		
5332	Craig	3	23	8	26	7/2	7/2	7/2	30	30	22	5/1	15	11	27	20		
4157	Ajax (ck)	4	21	11	27	4	4	4	7/1	7/1	26	4/30	13	11	30	20		
6612	(B-A) x (Iogold x V-R)	4	21	9	26	3	3	3	3	3	25	4/30	14	12	29	20		
4181	Overland	4	21	10	25	2	2	2	3	3	24	28	14	11	29	24		
5946	Sauk	4	24	8	25	3	3	3	1	1	22	29	14	11	31	21		
4372	Shelby	4	21	9	24	3	3	3	1	1	23	30	13	11	8/1	26		
6662	Improved Garry	5	23	12	27	5	5	5	3	3	23	5/3	15	11	7/31	25		
2053	Markton (ck)	5	21	13	26	4	4	4	2	2	24	4/29	14	13	8/2	24		
3865	(V-R) x Bannock	5	24	11	25	4	4	4	3	3	23	28	14	12	7/30	25		
3916	Cody	6	24	13	28	4	4	4	6	6	22	28	14	13	8/1	27		
5347	C.I. 4189 x Overland	6	22	12	7/1	5	5	5	5	5	24	30	14	13	7/31	25		
5226	Fortune	6	25	11	6/26	4	4	4	3	3	24	5/2	16	12	12	24		
6648	Garry	6	24	11	28	5	5	5	3	3	24	4/29	14	12	29	26		
6767	Simcoe (ck)	6	20	10	26	4	4	4	1	1	25	5/1	12	11	8/4	8/1		
6613	C.I. 4189 x Overland	7	24	12	28	5	5	5	7	7	27	5/1	16	13	1	7/26		
5345	Clinton x Overland ²	7	25	12	30	6	6	6	5	5	25	1	15	13	1	25		
5346	Clinton x Overland ²	7	23	15	28	7	7	7	6	6	27	1	16	14	7/31	23		
6611	Park	7	25	14	7/1	8	8	8	6	6	27	1	16	14	8/1	22		
2592	Bannock	8	24	14	6/30	8	8	8	6	6	28	4	16	15	2	27		
6661	Rodney	8	26	13	7/1	5	5	5	5	5	25	4	16	14	1	30		
3976	Shasta	9	30	17	1	10	10	10	8	8	30	7	17	16	4	29		
1145	Victory (ck)	10	29	16	1	11	11	11	6	6	7/1	3	16	13	4	30		
4158	Exeter	10	28	18	1	10	10	10	7	7	6/29	6	15	15	3	30		
Station average			7/22	7/11	6/26	7/2	7/2	7/2	7/1	7/1	6/23	4/29	6/13	6/11	7/28	7/22		

*Calculated date heading.

1/Not included in average.

Table 33. Miscellaneous data on oats included in the Uniform Northwestern States Nursery in 1955.

C.I. No.	Variety, hybrid or selection	Date ripe			Date harvested	Forage yield	Stem rust		Leaf rust	Bird damage	
		Hesperus, Colorado	Mesa, Arizona	Prosser, Washington			Havre, Montana	Sidney, Montana		Puyallup, Washington	Hesperus, Colorado
						Tons/A.	%	%	%	%	%
4157	Ajax (ok)	8/17	6/4	7/24	8/23	1.4	5				
4170	Andrew	17	3	27	23	1.4	tr	VS	25		
5657	Andrew x Clinton	18	3	24	23	1.9	40	S	10		
5658	Andrew x Clinton	19	3	29	25	1.6	40	S	40		
2592	Bannock	27	6	8/2	23	1.4	tr	R	15		
6612	(B-A) x (Iogold x V-R)	22	4	5	25	1.4	tr	MR	25	2	
5347	C.I. 4189 x Overland	23		7/25	25	1.6	5	R	15	4	
6613	C.I. 4189 x Overland	25	5	30	26	1.5	tr	VS	30		
5647	Clarion	18		23	23	1.5	25	VS	20	2	
5869	Clintafe	19	3	27	23	1.4	10	S	40		10
6701	Clinton	18	2	22	23	1.5	5	S	30		20
4259	Clinton 59 (ok)	18		23	26	1.7	5				30
5345	Clinton x Overland ²	23		8/3	26	1.5	tr	VS	30	2	
5346	Clinton x Overland ²	26	5	4	26	1.5	tr	VS	25		
3916	Cody	23	2	3	25	1.5	tr	S	25	2	
5332	Craig	19	4	7/27	25	1.8	5	S	40		
4158	Exeter	29	6	25	24	1.4	-	VS	10		
5226	Fortune	22	5	8/1	24	1.4	5	VS	10	4	
6648	Garry	23	5	7/26	25	1.4	-	MR	R-T		
6662	Improved Garry	23	6	26	24	1.6	-	MR	T		
5441	Jackson	19	4	23	26	1.9	5	S	5		
2053	Markton (ok)	26	5	8/9	26	1.2	10	VS	50		
6765	Minland	17	3	7/29	24	1.6	-	R	MR-5		
4181	Overland	22	4	28	25	1.4	5	S	25	4	
6611	Park	26	5	8/2	25	1.4	tr	MR	30	2	
6661	Rodney	26	6	2	25	1.5	-	MR	10		
5946	Sauk	22	4	7/28	24	1.3	tr	R	10		
3976	Shasta	30	7	8/6	30	1.4	tr	VS	40		
4372	Shelby	22	4	7/26	25	1.3	5	S	30		
6767	Simcoe (ok)	21	4	23	23	1.4	-	VS	20	6	
6537	(Victoria x H-B) x Colo	19	3	28	24	1.5	-	R	5		
3865	(V-R) x Bannock	23	4	29	29	1.3	tr	R	25	6	
1145	Victory (ok)	29	6	8/1	28	1.2	-	VS	40		
5440	Waubay	19	3	7/26	23	1.4	10	S	20		
4373	Winema	19	4	27	24	1.4	tr	R	15		

Uniform Northwestern States Nursery Grown on Non-Irrigated Stations

The nursery was grown on 13 non-irrigated stations in 1955, as follows:

Mont. - Creston	Wash. - Pullman
Havre	Puyallup
Moccasin	Ore. - Pendleton
Sidney	Moro
Wyo. - Sheridan	Corvallis
Idaho - Moscow	
Sandpoint	
Tetonia	

Data on nurseries grown on the above stations are included in Tables 34 to 38 inclusive. Certain additional data on oats grown on non-irrigated stations are presented in Tables 31 and 33.

In 1955 the nursery was grown at two new locations, Moccasin and Sidney, Montana.

The nurseries at Moccasin and Tetonia were damaged by hail. The damage at Moccasin came sufficiently early so that the secondary growth produced a fair to poor crop by late summer. The hail at Tetonia came later in the season and the test had to be abandoned.

A very cool wet spring delayed seeding sufficiently so that only a fair crop was produced at Corvallis. The land on which the nurseries at Pendleton and Sandpoint was grown was fertilized with 40 and 45 pounds of nitrogen per acre, respectively, prior to seeding.

Yield, Bushels per Acre

The highest yields were reported from Moscow and Creston where the average yields of all entries were 124.5 and 119.3 bushels per acre, respectively. The lowest average yield, 22.6 bushels per acre, was produced at Moccasin. An important contributing factor to this low yield at Moccasin was the hail storm on June 26. The average yields for the region were above those for 1954 but appreciably below those obtained in 1953. Park in 1955, as in the past several years, was one of the five highest yielding oats in the Northwestern regional test. In 1955, C.I. 3865, Cody and Park ranked 1, 2, and 5 respectively in yield and none of the three has ranked lower than eighth in the non-irrigated nursery during the past three years. The Canadian oats varied in yield. Fortune averaging 77.2 ranked highest and Garry, averaging 71.3 bushels per acre was the lowest yielder of the group. On the average yields in 1955 were lower than in 1954 and 1953 and may possibly be considered more nearly typical of our western dryland. Neither the early maturing entries from the Cornbelt area nor the extremely vigorous oats like Shasta produced good yields.

Test Weight

Data on weight per bushel were recorded at 10 stations in 1955. Average test weights ranged from 37.7 pounds for Shelby to 31.8 pounds per bushel for C.I. 6765. The test weights of entries in the nursery in 1955 were lower than those in 1954 but above those in 1953. Shelby and Jackson were the only oats having heavier test weights than Clinton 59, the highest testing of the five checks. The five check varieties, Clinton 59, Simcoe, Ajax, Victory and Markton tested 37.2, 35.4, 35.1, 34.8 and 34.6 pounds per bushel, respectively.

Plant Height

Nine stations reported data on plant height in 1955. The average height of the entries ranged from 2 to 5 inches shorter than in either 1954 or 1953. Shasta is the only entry in the nursery which is usually taller than the Victory check. The five tallest oats were Victory, Shasta, Ajax, Simcoe, and Fortune which ranged from 38.4 to 36.8 inches in plant height. The three shortest entries were Winema, Craig and Cody. All averaged less than 30 inches tall. Oats grew shortest at Corvallis and tallest at Creston and Puyallup. The average height of all entries was 25 inches at Corvallis and 41 inches at Creston and Puyallup.

Standing Ability

Lodging was reported from 5 stations in 1955. Average lodging varied from 9.2 percent at Sandpoint to 0.1 at Pullman. An observation of considerable interest is the exceptionally heavy lodging in Overland and slight amount of lodging in Bannock and Cody in 1955. The excellent straw of Clinton x Overland² selections was again shown in 1955 by their very low average percents of lodging at all stations. Markton, Simcoe, Ajax and C.I. 6537 lodged rather severely which makes them less suited for growing on high fertility soil.

Date Headed

The date of heading was recorded at 9 stations in 1955. Oats headed latest at Pullman and earliest at Pendleton. The average heading date for all entries was July 22 at the former and June 22 at the latter station. The 3 latest maturing varieties, Shasta, Exeter, and Victory, all headed July 12. The early maturing entries, C.I. 6765 and Andrew, both headed on July 1.

Date Ripe

No date on time of ripening of the entries was reported by any non-irrigated nursery.

Reaction to Disease

Reports of stem rust infection were received from Sidney and Havre and crown rust from Sidney. Data appear in Table 33.

Forage Value

Forage yields were reported from the Moro station in 1955. C.I. 5658, Jackson and Craig produced the greatest total tonnage of forage. The late maturing oats such as Shasta and Victory were among the lower producing entries. Data appear in Table 33.

Table 34. Summary data obtained on the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1955.

Rank in yield	C.I. No.	Variety or selection	1955 Acre yield (12 Sta) bu.	Bushel weight (10 Sta) lbs.	Plant height (9 Sta) in.	Lodging (7 Sta) %	Date head (9 Sta)
1	3865	(V-R) x Bannock	80.3	34.7	31.8	3.6	7/7
2	3916	Cody	79.5	35.9	29.4	2.0	9
3	6612	(B-A) x (Iogold x V-R)	79.4	35.9	31.3	1.4	7
4	5347	C.I. 4189 x Overland	79.1	36.2	34.2	2.4	9
5	6611	Park	78.8	35.3	33.5	1.1	10
6	5346	Clinton x Overland ²	78.7	36.2	32.8	1.1	9
7	5226	Fortune	77.2	35.3	36.8	5.4	9
8	5332	Craig	77.0	35.4	28.8	2.0	8
9	5345	Clinton x Overland ²	76.3	35.9	33.9	1.4	9
10	6662	Improved Garry	75.8	35.4	35.7	2.0	8
11	6613	C.I. 4189 x Overland	75.6	35.6	34.7	0.9	10
11	6767	Simcoe	75.6	35.4	36.9	9.0	7
13	4158	Exeter	74.2	34.3	35.5	3.8	12
14	4181	Overland	74.1	36.1	30.7	7.1	7
15	2592	Bannock	73.8	36.2	35.0	4.5	10
15	6661	Rodney	73.8	36.2	33.8	1.6	10
17	4157	Ajax (ck)	72.5	35.1	37.1	13.4	7
18	5658	Andrew x Clinton	71.9	35.6	34.7	3.6	4
19	5657	Andrew x Clinton	71.7	34.3	33.1	1.9	4
20	6648	Garry	71.3	35.6	35.4	1.9	8
21	5946	Sauk	71.1	36.5	33.3	2.9	8
22	4373	Winema	70.7	33.9	27.3	1.3	5
23	6537	(Victoria x H-B) x Colo	70.5	36.7	32.8	10.1	3
24	1145	Victory	70.3	34.8	38.4	9.1	12
25	4372	Shelby	70.2	37.7	34.2	3.3	7
26	5441	Jackson	69.4	37.6	34.5	6.0	5
27	2053	Markton	68.7	34.6	36.1	20.3	8
28	3976	Shasta	68.5	34.2	37.3	8.0	12
29	5869	Clintafe	66.7	35.4	32.8	1.4	7
30	5647	Clarion	66.3	36.4	34.2	1.4	3
31	4170	Andrew	66.1	36.0	33.3	3.9	1
31	5440	Waubay	66.1	36.8	33.3	1.4	4
33	6765	Minland	65.4	31.8	33.5	3.0	1
34	4259	Clinton 59	62.0	37.2	30.8	2.3	4
35	6701	Clintland	58.8	36.9	31.9	2.1	3

Table 35. Yields of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 12 stations	Rank 12 stations	Sidney Montana	Creston Montana	Harvey Montana	Moccasin Montana	Sheridan Wyoming	Sandpoint Idaho	Moscow Idaho	Pullman Washington	Puyallup Washington	Pendleton Oregon	Moro Oregon	Cortez Illinois
Bushels per acre															
3865	(V-R) x Bannock	80.3	1	90.6	134.3	61.8	30.6	47.4	90.3	131.0	102.2	73.5	112.1	50.0	40.2
3916	Cody	79.5	2	90.0	129.4	56.0	23.4	54.0	77.6	140.0	101.3	67.5	120.3	58.4	35.8
6612	(B-A) x (Iogold x V-R)	79.4	3	81.2	146.2	56.6	20.3	48.5	78.4	133.0	101.3	75.3	116.7	56.0	39.4
5347	C.I. 4189 x Overland	79.1	4	90.2	138.7	75.4	23.1	53.0	75.3	133.0	96.0	57.2	108.5	58.3	40.5
6611	Park	78.8	5	80.9	149.8	63.2	25.3	46.8	84.6	142.0	102.5	62.1	95.4	52.6	40.1
5346	Clinton x Overland ²	78.7	6	88.1	144.9	68.1	26.5	53.9	78.8	131.0	92.5	67.1	103.8	54.9	34.9
5226	Fortune	77.2	7	87.7	115.2	68.5	28.7	59.9	65.9	130.0	92.8	66.0	112.4	52.0	47.2
5332	Craig	77.0	8	65.7	143.1	67.6	27.0	51.3	71.6	124.0	96.3	60.4	124.7	62.9	29.2
5345	Clinton x Overland ²	76.3	9	83.7	133.4	50.2	22.5	57.0	81.1	138.0	91.9	66.1	102.2	55.1	34.3
6662	Improved Garry	75.8	10	79.2	121.4	71.3	24.3	59.2	59.9	135.0	87.2	67.5	108.9	55.6	40.3
6767	Simcoe	75.6	11	89.1	115.2	57.6	21.9	56.4	70.2	133.0	86.0	72.1	119.9	45.3	40.3
6613	C.I. 4189 x Overland	75.6	11	78.5	127.2	53.7	23.0	50.9	78.4	135.0	99.4	63.6	107.6	56.0	34.3
4158	Exeter	74.2	13	86.4	109.6	58.9	23.8	44.0	72.9	134.0	101.9	62.1	100.5	47.7	48.7
4181	Overland	74.1	14	87.7	146.2	57.1	20.6	51.8	68.2	116.0	93.8	68.2	90.6	55.5	33.2
2592	Bannock	73.8	15	83.9	116.1	52.3	20.6	46.7	82.3	124.0	104.7	62.9	99.2	48.4	44.1
6661	Rodney	73.8	15	86.3	121.0	61.6	17.5	48.4	74.7	118.0	95.7	68.3	106.8	45.4	42.2
4157	Ajax (ck)	72.5	17	78.7	116.1	55.7	27.5	53.4	66.8	118.0	96.9	65.2	107.8	43.9	40.4
5658	Andrew x Clinton	71.9	18	73.2	115.6	47.6	27.1	60.1	65.0	123.0	101.7	61.7	105.4	51.6	31.1
5657	Andrew x Clinton	71.7	19	78.6	109.5	58.0	22.3	57.7	57.6	134.0	89.1	56.5	105.2	61.2	30.3
6648	Garry	71.3	20	78.0	105.0	57.3	22.8	50.5	66.3	124.0	90.0	63.4	116.5	52.5	29.5
5946	Sauk	71.1	21	90.5	115.0	45.9	20.3	54.1	70.4	141.0	87.3	45.0	104.4	45.6	34.3
4373	Winema	70.7	22	89.8	115.0	49.9	23.3	54.3	51.1	109.0	97.5	57.8	113.9	52.1	34.6
6537	(Victoria x H-B) x Colo	70.5	23	80.4	125.4	43.9	21.8	56.1	69.2	122.0	85.3	59.2	101.1	49.8	32.2
1145	Victory	70.3	24	64.0	118.3	61.7	18.3	42.5	77.1	118.0	99.4	46.4	105.8	48.8	43.7
4372	Shelby	70.2	25	77.8	108.6	42.4	21.9	51.0	61.7	131.0	95.6	60.8	106.4	47.8	37.2
5441	Jackson	69.4	26	78.2	101.5	47.0	19.8	59.8	72.8	125.0	87.5	53.9	100.4	54.2	33.2
2053	Markton	68.7	27	85.0	105.0	46.7	23.8	51.4	71.2	130.0	103.1	42.9	91.6	41.3	31.9
3976	Shasta	68.5	28	76.4	107.2	43.3	17.7	41.6	77.3	124.0	116.3	51.3	79.6	45.8	41.9
5869	Clintafe	66.7	29	73.9	96.6	39.2	25.0	56.9	67.0	121.0	85.0	49.4	94.1	48.3	44.0
5647	Clarion	66.3	30	78.6	120.5	50.7	16.9	58.3	62.0	105.0	80.0	51.0	98.9	48.5	25.8
4170	Andrew	66.1	31	79.1	107.2	50.5	20.5	48.6	59.0	110.0	76.6	60.6	98.4	52.3	30.9
5440	Waubay	66.1	31	78.3	121.4	57.9	20.9	47.2	70.5	125.0	76.9	43.0	81.4	45.6	24.8
6765	Minland	65.4	33	75.9	105.5	46.2	24.5	52.7	55.9	108.0	86.3	44.8	93.2	51.2	40.4
4259	Clinton 59	62.0	34	73.3*	99.7	57.8	18.9	42.6	50.5	104.0	78.2	56.8	89.6	49.6	23.2
6701	Clintonland	58.8	35	68.3	90.4	38.0	19.8	52.5	58.1	90.0	70.0	57.8	93.5	45.8	21.6
Station average		80.8		119.3	54.8	22.6	69.7	124.5	92.8	59.6	103.3	51.1	35.9		

*Calculated yield.

Table 36. Bushel weight of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 10 stations	Sidney Montana	Creston Montana	Haure Montana	Moccasin Montana	Sheridan Wyoming	Sandpoint Idaho	Pullman Washington	Pendleton Oregon	Moro Oregon	Corvallis Oregon
Pounds												
4372	Shelby	37.7	36.0	41.0	36.7	36.9	33.0	39.0	41.2	40.4	38.8	33.9
5441	Jackson	37.6	36.5	41.0	35.5	35.8	32.0	38.0	41.3	39.7	39.2	37.0
4259	Clinton 59	37.2	35.6 ^a	39.0	38.0	37.3	37.0	36.0	38.0	39.0	37.6	34.8
6701	Clintonland	36.9	36.7	39.0	35.7	36.8	34.0	38.0	39.0	39.6	35.8	33.5
5440	Waubay	36.8	36.5	37.0	36.4	38.6	32.0	37.0 ^a	38.8	39.2	38.0	34.7
6537	(Victoria x H-B) x Colo	36.7	36.1	40.0	37.1	37.2	30.0	36.0	39.3	39.9	36.0	35.3
5946	Sauk	36.5	36.8	38.0	36.8	35.6	32.0	36.0 ^a	39.8	38.6	38.2	33.2
5647	Clarion	36.4	36.3	38.0	34.6	35.4	35.0	37.0	38.9	38.6	35.7	34.6
2592	Bannock	36.2	34.8	39.0	37.4	35.2	29.0	37.0	40.3	37.9	37.2	34.4
5347	C.I. 4189 x Overland	36.2	35.3	39.0	35.9	36.5	30.0	36.0	38.9	37.6	36.8	35.6
5346	Clinton x Overland ²	36.2	33.7	40.0	36.9	36.8	30.0	36.0	39.7	38.7	36.9	33.4
6661	Rodney	36.2	35.8	40.0	36.8	30.7	28.0	36.0 ^a	41.0	39.4	39.0	35.4
4181	Overland	36.1	33.8	39.0	36.3	35.0	30.0	37.0	39.2	38.8	36.6	34.9
4170	Andrew	36.0	35.2	38.0	35.0	35.2	32.0	35.0	39.2	38.4	36.6	35.5
6612	(B-A) x (Iogold x V-R)	35.9	34.2	37.0	35.5	35.8	31.0	36.0	39.0	37.7	37.8	34.6
5345	Clinton x Overland ²	35.9	36.2	38.0	36.2	36.4	28.0	37.0	39.6	37.6	36.2	34.2
3916	Cody	35.9	33.2	38.0	34.6	36.5	31.0	37.0	38.8	38.4	37.6	33.9
5658	Andrew x Clinton	35.6	33.2	39.0	34.3	36.6	31.0	35.0	38.5	37.7	36.6	34.3
6613	C.I. 4189 x Overland	35.6	35.8	39.0	35.4	34.7	29.0	37.0	38.2	35.8	37.2	34.3
6648	Garry	35.6	32.3	40.0	35.5	36.9	30.0	36.0	39.5	35.3	36.7	33.5
5869	Clintafe	35.4	32.6	38.0	33.9	37.1	32.0	36.0	38.3	37.5	35.5	32.9
5332	Craig	35.4	32.7	38.0	35.2	36.0	30.0	34.0	38.6	37.7	38.4	33.4
6662	Improved Garry	35.4	34.0	39.0	35.2	35.0	30.0	32.0	39.8	37.5	36.4	34.8
6767	Simcoe	35.4	33.3	38.0	36.0	35.8	31.0	33.0	39.7	36.6	36.3	34.1
5226	Fortune	35.3	33.5	40.0	34.9	34.7	31.0	36.0	39.6	34.2	35.4	33.9
6611	Park	35.3	34.8	38.0	35.5	35.6	26.0	36.0	38.9	38.1	36.8	33.8
4157	Ajax (ok)	35.1	34.5	39.0	34.7	35.5	30.0	33.0	39.6	35.0	36.3	33.9
1145	Victory	34.8	33.2	37.0	36.3	31.1	23.0	39.0	40.8	36.8	37.3	33.6
3865	(V-R) x Bannock	34.7	31.5	37.0	32.5	33.5	30.0	35.0 ^a	39.6	37.6	37.1	33.7
2053	Markton	34.6	34.5	34.0	33.2	34.4	31.0	36.0	37.8	37.0	35.8	32.7
5657	Andrew x Clinton	34.3	31.8	37.0	33.8	35.9	30.0	32.0	37.2	37.3	35.8	32.4
4158	Exeter	34.3	32.7	34.0	34.2	33.4	25.0	36.0	39.3	38.1	35.9	34.6
3976	Shasta	34.2	31.5	39.0	32.8	32.4	25.0	36.0	38.6	36.6	33.2	36.6
4373	Winema	33.9	33.5	37.0	31.8	33.8	30.0	31.0	37.3	36.4	36.4	32.1
6765	Minland	31.8	31.0	34.0	31.0	27.8	30.0	32.0	34.7	35.2	32.2	30.0
	Station average		34.3	38.0	35.2	35.2	30.0	35.7	39.1	37.7	36.6	34.1

^aCalculated bushel weights.

Table 37. Plant height of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 9 stations	Creston Montana	Havre Montana	Sandpoint Idaho	Moscow Idaho	Pullman Washington	Puyallup Washington	Pendleton Oregon	Moro Oregon	Corvallis Oregon
						Inches					
4373	Winema	27.3	33	22	24	31	30	34	30	23	19
5332	Craig	28.8	34	25	27	34	29	34	32	24	20
3916	Cody	29.4	35	27	24	33	32	39	31	24	20
4181	Overland	30.7	38	26	28	37	30	38	31	25	23
4259	Clinton 59	30.8	37	26	29	35	34	35	35	25	21
6612	(B-A) x (Iogold x V-R)	31.3	36	26	28	33	38	40	33	26	22
3865	(V-R) x Bannock	31.8	40	25	29	37	32	41	35	25	22
6701	Clintland	31.9	36	24	33	39	32	38	36	26	23
5869	Clintafe	32.8	42	23	32	39	31	38	36	27	27
5346	Clinton x Overland ²	32.8	39	23	29	40	31	43	47	27	26
6537	(Victoria x H-B) x Colo	32.8	41	24	28	40	34	39	37	26	26
5657	Andrew x Clinton	33.1	38	25	40	38	36	38	35	25	23
4170	Andrew	33.3	38	28	33	37	37	41	36	25	25
5946	Sauk	33.3	41	28	31	38	33	42	35	27	25
5440	Waubay	33.3	36	28	32	40	36	38	37	27	26
6765	Minland	33.5	41	30	31	36	35	41	37	25	26
6611	Park	33.5	43	29	28	41	36	40	34	27	24
5647	Clarion	33.7	38	30	34	38	34	38	38	27	26
6661	Rodney	33.8	44	28	31	41	34	43	29	30	24
5345	Clinton x Overland ²	33.9	42	28	30	41	34	41	36	28	25
5347	C.I. 4189 x Overland	34.2	44	30	30	40	37	40	34	28	25
4372	Shelby	34.2	41	27	34	39	34	44	36	27	26
5441	Jackson	34.5	41	28	34	41	36	42	37	27	25
5658	Andrew x Clinton	34.7	41	28	31	41	36	43	39	28	25
6613	C.I. 4189 x Overland	34.7	41	29	33	42	36	42	35	29	25
2592	Bannock	35.0	42	29	33	41	38	42	36	29	25
6648	Garry	35.4	45	27	32	42	33	43	38	32	27
4158	Exeter	35.5	45	27	35	38	37	43	39	30	26
6662	Improved Garry	35.7	45	28	31	41	34	43	39	32	28
2053	Markton	36.1	45	28	35	42	39	44	37	29	26
5226	Fortune	36.8	44	31	34	44	34	47	40	30	27
6767	Simcoe	36.9	44	29	33	44	36	47	39	31	29
4157	Ajax (ck)	37.1	45	31	33	44	38	45	41	31	26
3976	Shasta	37.3	47	30	37	36	38	50	38	31	29
1145	Victory	38.4	48	31	35	42	39	49	42	32	28
	Station average		41	27	31	39	35	41	36	28	25

Table 38. Date of heading of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1955.

C.I. No.	Variety, hybrid or selection	Average 9 stations	Oregon	Hayre Montana	Sheridan Wyoming	Moscow Idaho	Pullman Washington	Puyallup Washington	Pendleton Oregon	Moro Oregon	Corvallis Oregon
4170	Andrew	7/1	7/5	7/16	6/22	6/30	7/20	7/6	6/15	6/15	7/5
6765	Minland	1	5	16	22	29	22	5	15	14	5
5647	Clarion	3	8	16	21	7/1	20	9	18	19	5
6701	Clinton	3	7	14	23	1	19	10	18	18	5
6537	(Victoria x H-B) x Colo	3	8	18	23	1	21	7	16	17	6
5657	Andrew x Clinton	4	10	16	25	1	21	10	18	19	11
5658	Andrew x Clinton	4	8	18	22	2	20	12	18	20	7
4259	Clinton 59	4	10	16	22	1	21	9	18	19	7
5440	Waubay	4	7	16	24	1	20	10	19	20	7
5441	Jackson	5	11	16	23	2	21	11	20	21	7
4373	Winema	5	7	18	25	5	22	10	20	19	12
4157	Ajax (ok)	7	12	19	20	8	22	14	23	25	10
6612	(B-A) x (Iogold x V-R)	7	12	21	23	11	20	13	21	22	11
5869	Clintafe	7	13	18	21	2	22	16	23	22	17
4181	Overland	7	12	21	22	10	21	14	21	23	11
4372	Shelby	7	14	23	21	7	23	13	23	23	8
6767	Sincoe	7	12	21	23	8	23	12	23	24	7
3865	(V-R) x Bannock	7	13	21	23	10	21	17	23	20	10
5332	Craig	8	14	21	23	11	23	15	22	22	11
6662	Improved Garry	8	15	20	22	9	23	14	23	24	11
6648	Garry	8	14	21	22	10	22	14	23	24	11
2053	Markton	8	12	19	23	14	24	14	23	22	13
5946	Sauk	8	14	21	23	7	24	17	23	24	11
5347	C.I. 4189 x Overland	9	15	20	23	10	22	17	24	25	12
5345	Clinton x Overland2	9	14	21	25	12	22	16	23	25	12
5346	Clinton x Overland2	9	14	21	22	12	20	18	23	26	13
3916	Cody	9	15	21	21	12	23	18	23	24	18
5226	Fortune	9	14	21	24	10	22	16	24	25	13
2592	Bannock	10	15	22	24	12	24	18	24	27	11
6613	C.I. 4189 x Overland	10	15	21	22	14	24	18	25	26	13
6611	Park	10	16	21	25	15	23	18	24	26	13
6661	Rodney	10	17	22	24	11	23	16	25	27	12
4158	Exeter	12	18	23	27	20	24	18	27	29	17
3976	Shasta	12	19	24	27	8	24	20	28	7/2	17
1145	Victory	12	19	23	23	19	24	20	28	3	12
Station average			7/12	7/20	6/23	7/8	7/22	7/14	6/22	6/23	7/11

SOUTH CENTRAL AND SOUTHWESTERN REGION

Weather conditions in the region were on the whole somewhat more favorable than in 1954. This region extends from the Atlantic to the Rocky Mountains and in general lies in the transition zone between the great region of spring oat production in the northern part of the nation and the southern region where oats are grown primarily from fall seeding. In this region only early maturing oats are consistently good yielders and oats of the maturity range yielding best in the Corn Belt area are on the average too late in maturing. This is a distinct ecologic area and few oats that yield well here have been high yielders in the area to the north.

The oat yields in this region in 1955 averaged much better than in 1954 but in the southwestern region yields were unusually poor at some points. This was especially true in parts of Kansas, in Colorado, Oklahoma and in northern Texas. A prolonged spring drought injured the crop in that area. Elsewhere yields were above average so that the overall averages for the nursery were not too much below those of 1954 and exceeded those of many recent years.

Rust was not a problem in this region in 1955 and as few oats susceptible to *Helminthosporium victoriae* are still grown in this part of the country damage from disease was almost negligible. Only one uniform yield nursery is grown in this very widespread region. As a consequence yield data from the different parts of this area are summarized separately.

Uniform Spring Sown Red Oat Experiment

As in previous years only the one uniform agronomic oat nursery was grown in the Region although yield data from different sections are summarized separately. As Nebraska and Kansas are usually considered geographically to be southwestern states although grouped for experimental purposes in the North Central Region, data from stations in those two states are included in both the summaries on the North Central and Southwestern stations. Data from stations in other states are included in a single average in each case.

Stations receiving seed for growing this nursery in 1955 included the following:

Colo. - Akron	Mo. - Columbia
Ill. - Brownstown	Neb. - Lincoln
Ind. - Lafayette	N. J. - Mt. Holly
Iowa - Ames	New Brunswick
Kans. - Manhattan	Ohio - Columbus
Hays	Okla. - Stillwater
Powhattan	Texas - Denton
Ky. - Lexington	Va. - Blacksburg
Md. - Beltsville	

As a result this nursery was grown for yield on 17 stations in 1955; 5 in the East and South; 9 in the North Central and 7 in the Southwest. Only 4 of the latter were not also included in the North Central Region.

In addition to the yield nurseries these strains were grown in observation or disease nurseries at Beltsville, Md.; Ames, Iowa; Manhattan, Kans.; and at Aberdeen, Idaho.

A total of only 22 entries were grown in 1955. Seed of comparatively few new entries of oats of this type was available in sufficient quantity to be included. However numerous new selections from various hybrids are being grown in individual station nurseries and prospects are that the number of new entries will be increased considerably in 1956.

Check varieties included were the same ones grown in 1954: Andrew, Clinton 59, Kanota, Osage and Columbia. Kanota is the long time check, Andrew and Columbia are included to check yields, Osage to check on the presence of *H. victoriae* and Clinton 59 to check standing ability in these oats. Data on origin of entries in this nursery are presented in Table 39 and summary data on them are presented in Table 40. Tables 41 to 49 inclusive include data from individual stations.

Yield, Bushels per Acre

As in previous years yield data in this report are divided and four averages appear. These are (1) the overall average for all 17 stations reporting yields; (2) average for the 5 stations in the East and South; (3) average for 9 stations in the North Central states and (4) average for the 7 stations in the Southwest. The fact that the Kansas and Nebraska stations appear twice has been mentioned.

Data from the 5 stations in the East and South indicate comparatively high yields were obtained on all stations and yields were exceptionally good at Beltsville, Md., and the two points in New Jersey. The highest yielding entry in these nurseries was C.I. 6632 derived from the cross Andrew x Landhafer followed by Andrew and Dupree. All exceeded 70 bushels on the average. The poorest yield, 58.0 bushels was recorded for C.I. 6730.

In the North Central region exceedingly high yields were produced as 9 of the 22 entries averaged above 85 bushels per acre. C.I. 6632 averaged best with an average of 97.6 bushels followed by Mo. O-205 and Andrew each with averages exceeding 92 bushels. In this area also C.I. 6730 produced least with an average of only 59.3 bushels or more than 33 bushels under the 3 top yielders.

Yields in the Southwest were very low at Akron, Stillwater and Denton but exceptionally high yields were recorded at Powhattan and Manhattan. In fact such high averages were produced on those stations that the poor yields elsewhere are not evident in area results. In this area Mo. O-205 averaged most, 69.5 bushels per acre followed by C.I. 7029 and C.I. 6632 both of which exceeded 62 bushels per acre. In this area also C.I. 6730 produced the lowest yield.

Overall results indicate Mo. O-205 yielded most, 77.4 bushels whereas C.I. 6632 ranked next with an average of 76.8 and Andrew third averaging 75.3 bushels per acre. C.I. 6730, of course, ranked last.

Test Weight

Data on test weights were obtained from all 17 stations reporting yields. On the average test weights were about average for the region although the exceedingly low tests reported from Akron, Colo., Stillwater, Okla., and Denton, Tex. tended to reduce overall averages. The best average test weights were recorded for C.I. 6927, Mo. O-205, C.I. 6625 and C.I. 6913. All exceeded 32 pounds per bushel. C.I. 6632, an exceptionally good yielding oat tested lowest, only 29.5 pounds per bushel in 1955. Osage and Kanota were also comparatively poor in test weights.

Plant Height

Data from 14 stations indicated that on the average oats grew tall in 1955. Averages exceeded those of 1954 by some 4 to 5 inches in many cases. The tallest entries were Mo. O-205, 38.4 inches; C.I. 6913, 37.4 inches; and Columbia, 36.9 inches tall. Osage with an average height of only 30.3 inches was the shortest entry grown.

Standing Ability

Percents on lodging were received from 12 stations in 1955. Lodging was severe in nearly all entries at Lafayette, Ind., and in many entries at several other stations. The stiffest strawed entry was Clintland followed by C.I. No's. 6913 and 6644. On the average these three entries lodged 10.7, 14.7, and 15.3 percent, respectively. Mo. O-205 lodged 17.6 percent and the check, Clinton 59, 18.0 percent. C.I. 6730 lodged most, 60.3 percent which may partially explain its poor yield. Kanota was second and Columbia third from the bottom in standing ability.

Date Headed

Data on date of heading were reported from 14 stations. Except at Akron, Lafayette, Ames and Beltsville, most entries headed in May. On the average C.I. No's. 6927, 6925 and 6730 headed first, May 28, whereas the last entries to head were Clinton 59 and Clintland which headed June 2. Other entries headed between these dates.

Date Ripe

Only 3 stations reported data on date ripe. All oats ripened in June at Stillwater, in June at Denton and part in June and part in July at Lincoln. C.I. 6730 ripened first on the average; June 17, and C.I. 6639 last; June 24.

Reaction to Disease

Data on stem rust were obtained from 8 stations. Definite races of stem rust was used as inoculum at Lafayette, Beltsville and Columbia. C.I. No's. 7029 and 6913 were the most stem rust resistant entries in the nursery. Neither was susceptible to either races 7A or 8. Many other entries were resistant to one but not the other and many additional ones susceptible to both.

Data on reaction to crown rust were received from 7 stations. Inoculations with known races were made at 3 of these; Lafayette, Ames and Beltsville. Among the most resistant entries were Clintland and C.I. No's. 6913, 6620, 6632, and 7029. Certain old entries such as Columbia, Kanota and Dupree were most susceptible.

Data on smut infection were received from 4 stations. At Manhattan 3 types of smut inoculum were used and only C.I. 6926 was not infected by any. Other highly resistant entries were Dupree and C.I. No's. 6621, 6927 and 6625.

Data on infection by septoria were received from Ames, Iowa. All entries were infected although some more seriously than others.

Table 39. Entries included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or hybrid	Selection	Seed source
839	Kanota (ok)	Fulghum Strain	Kans. Check
2820	Columbia (ok)	Sel. from Fulghum: Mo. 01375	Mo. Check
3991	Osage	Fulton x (Victoria-Richland): Ab. 4318-7	U.S.D.A. Check
4170	Andrew (ok)	Bond x Rainbow: Minn. II-33-21	Minn. Check
4259	Clinton 59 (ok)	D69 x Bond: Iowa XM3218-35-1335-3-10	Ind. Check
4301	Nemaha	(Vict.-Richland) x (Morota-Bond): Iowa 37-20-2-82-1-10	Iowa
4672	Dupree	(Anthony-Bond) x (Richland-Fulghum): Kans. 441665	Kansas
4988	Mo. O-205	Columbia x (Victoria-Richland): Mo. 04205	Missouri
5444	Cherokee Reselection	D69 x Bond: Iowa 3846-24	Iowa
6620	Andrew x Landhafer	Idaho Sel. 3889-1	Md. - Idaho
6621	Andrew x Landhafer	Idaho Sel. 3889-3	Md. - Idaho
6625	Columbia x Marion	Mo. Sel. 04346	Missouri
6632	Andrew x Landhafer	Idaho 3876-3	Md. - Idaho
6639	Andrew x Landhafer	Idaho 3887-2	Md. - Idaho
6644	Clinton ² x Ark. 674	Purdue RA461A1-3-41-2	Ind.
6701	Clintonland	Landhafer x Clinton ⁴ : Purdue B4916A3-4	Ind.
6730	(Lee-Vict. x Fulwin) x (Colo x Fultex: CI 5393)	Miss. Delta 5-1060	Miss.
6913	(Bond-Rainbow x Haj.-Joan.) x Landhafer	Minn. II-47-25	Minn.
6925	(Col. x Vict.-Rich.) x Mindo	Mo. 04520	Missouri
6926	(Columbia x Marion) x Mindo	Mo. 04534	Missouri
6927	Boone-Cartier x Clinton	Purdue 424A1-71-59	Ind.
7029	Osage x (Bonda x n-c x santa Fe)	Ab. '51 Row 1627	U.S.D.A. Idaho

Table 4Q Summary of data obtained on the Uniform Spring Sown Red Oat Experiment grown in 1955.

Rank in C.I. yield No.	Variety or selection	Average acre yields						Average all stations						
		Total average (17 Sta.)		East & South		N. Central ^{2/}		Southwest ^{3/}		Test wt. (17 Sta.)	Plant ht. (14 Sta.)	Lodg- ing (12 Sta.)	Date head (14 Sta.)	Date ripe (3 Sta.)
		Rank(5 Sta.) ^{1/}		Rank(9 Sta.)		Rank(7 Sta.)								
		Bu.	Bu.	Bu.	Bu.	Bu.	Bu.	Lbs.	Ins.	%				
1	4988 Mo. O-205	77.4	5	68.8	2	94.0	1	69.5	32.5	38.4	17.6	6/1	6/23	
2	6632 Andrew x Landhafer	76.8	1	71.7	1	97.6	4	62.3	29.5	33.3	33.8	5/31	23	
3	4170 Andrew (ok)	75.3	2	70.6	3	92.9	6	58.8	31.7	35.6	20.0	30	23	
4	6639 Andrew x Landhafer	72.3	7	68.4	4	89.8	9	57.4	30.6	34.0	28.7	30	24	
5	6620 Andrew x Landhafer	71.3	4	69.1	7	86.9	7	57.7	30.3	34.5	36.5	30	20	
6	6913 (Bond-Rain. x Haj.-Joan.) x Land.	70.7	13	62.6	6	87.6	5	61.3	32.4	37.4	14.7	31	22	
7	6621 Andrew x Landhafer	70.6	10	67.6	5	88.9	11	57.0	30.3	34.5	39.9	30	22	
8	4672 Dupree	70.2	3	70.2	10	84.8	10	57.1	30.8	34.9	42.7	29	19	
9	3991 Osage (ok)	69.3	17	60.7	8	86.3	3	63.9	30.3	30.3	35.8	31	23	
10	6926 (Columbia x Marion) x Mindo	68.4	6	68.8	13	80.5	8	57.6	31.0	34.6	36.5	30	21	
11	7029 Osage x (Bonda x H-J x Santa Fe)	68.3	19	59.1	9	85.1	2	68.7	30.9	30.9	34.3	31	23	
12	6625 Columbia x Marion Mo. 04346	66.1	11	63.4	14	80.1	12	55.3	32.5	36.6	31.5	31	22	
13	6644 Clinton ² x Ark. 674	65.3	12	63.1	12	80.7	15	46.7	31.6	33.8	15.3	6/1	21	
14	6701 Clintland	62.7	22	54.2	11	81.6	13	50.7	31.8	35.0	10.7	2	21	
15	4259 Clinton 59 (ok)	62.1	14	62.6	15	77.1	20	43.5	31.3	33.9	18.0	2	20	
16	5444 Cherokee Reselection	61.8	16	61.8	16	76.4	16	44.2	31.8	33.3	25.5	5/30	21	
17	4301 Nemaha	61.0	18	59.4	17	75.4	19	43.5	31.4	33.4	24.8	30	21	
18	6927 Boone-Cartier x Clinton	60.3	8	68.3	20	69.6	22	40.0	32.7	33.9	18.8	28	22	
19	2820 Columbia (ok)	59.7	15	62.5	18	70.4	14	48.1	31.0	36.9	46.3	31	21	
20	839 Kanota (ok)	59.2	9	68.2	21	67.4	17	44.1	30.0	33.9	49.2	31	18	
21	6925 (Columbia x Vict-Rich) x Mindo	57.9	20	58.1	19	70.3	18	43.7	32.0	35.7	24.1	28	21	
22	6730 (Lee-Vict.xFulwin) x Colo x Fultex	52.6	21	58.0	22	59.3	21	43.3	31.5	33.7	60.3	28	17	

^{1/}Lexington, Ky.; Beltsville, Md.; Mt. Holly and New Brunswick, N. J.; Blacksburg, Va.

^{2/}Brownstown, Ill.; Lafayette, Ind.; Ames, Iowa; Hays, Powhattan and Manhattan, Kansas; Columbia, Mo.; Lincoln, Nebr.; Columbus, Ohio.

^{3/}Akron, Colo.; Hays, Manhattan and Powhattan, Kansas; Lincoln, Nebr.; Stillwater, Okla.; Denton, Texas.

Table 41. Yields on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Experiment grown in 1955.

C.I. No.	Variety or cross	Averages				Eastern and Southern Stations				
		Average all 17 Stations	Average 5 East and South	Average 9 North Central	Average 7 Southwest	Lexington Ky	Beltsville Md.	Mt. Holly N. J.	New Brunswick N. J.	Blacksburg Va.
		Bushels				Bushels				
4988	Mo. O-205	77.4	68.8	94.0	69.5	61.0	70.5	80.2	80.4	51.9
6632	Andrew x Landhafer	76.8	71.7	97.6	62.3	45.2	63.1	95.5	98.4	56.1
4170	Andrew (ck)	75.3	70.6	92.9	58.8	54.3	76.7	88.6	82.6	50.8
6639	Andrew x Landhafer	72.3	68.4	89.8	57.4	55.4	66.4	82.9	84.8	52.7
6620	Andrew x Landhafer	71.3	69.1	86.9	57.7	54.4	71.2	83.7	80.4	55.9
6913	(Bond-Rainbow x Haj.-Joan.) x Land.	70.7	62.6	87.6	61.3	42.6	60.7	81.8	74.8	53.1
6621	Andrew x Landhafer	70.6	67.6	88.9	57.0	53.0	60.7	86.1	83.7	54.6
4672	Dupree	70.2	70.2	84.8	57.1	50.8	67.6	89.1	89.5	53.4
3991	Osage (ck)	69.3	60.7	86.3	63.9	8.4	81.6	84.4	76.9	52.4
6926	(Col. x Marion) x Mindo	68.4	68.8	80.5	57.6	54.8	81.3	83.1	70.7	54.2
7029	Osage x (Bonda x HJ x SF)	68.3	59.1	85.1	68.7	50.8	64.3	70.2	69.6	43.2
6625	Columbia x Marion Mo. 04346	66.1	63.4	80.1	55.3	48.9	75.9	74.9	69.8	47.4
6701	Clintonland	62.7	54.2	81.6	50.7	43.5	60.9	66.7	60.4	39.3
6644	Clinton ² x Ark. 674	65.3	63.1	80.7	46.7	53.2	81.5	72.3	63.1	45.6
4259	Clinton "59" (ck)	62.1	62.6	77.1	43.5	55.5	74.6	71.5	71.7	39.5
5444	Cherokee Reselection	61.8	61.8	76.4	44.2	49.2	66.2	76.1	69.6	48.0
4301	Nemaha	61.0	59.4	75.4	43.5	45.9	70.0	75.8	60.2	45.0
6927	Boone-Cartier x Clinton	60.3	68.3	69.6	40.0	48.0	82.9	83.5	74.4	52.8
2820	Columbia (ck)	59.7	62.5	70.4	48.1	61.5	61.3	77.4	67.0	45.3
839	Kanota (ck)	59.2	68.2	67.4	44.1	54.3	70.2	79.7	89.5	47.1
6925	(Col. x Vict.-Rich.) x Mindo	57.9	58.1	70.3	43.7	42.6	69.6	70.2	64.5	44.3
6730	(Lee-Vict. x Fulwin) x Colo x Fultex	52.6	58.0	59.3	43.3	44.2	52.8	73.7	74.7	44.6

Table 42. Yields on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Experiment grown in 1955.

[illegible]

Table 44. Plant height on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Average 14 Stations	Akron Colo.	Brownstown Ill.	Ames Iowa	Hays Kansas	Manhattan Kansas	Powhattan Kansas	Lexington Ky.	Beltsville Md.	Columbia Mo.	Lincoln Neb.	New Brunswick N. J.	Columbus Ohio	Stillwater Okla.	Blacksburg Va.
									Inches							
4988	Mo. O-205	38.4	32.0	45.0	42.0	32.0	39.0	42.0	44.0	39.0	47.0	32.0	39.0	37.0	37.0	30.0
6913	(Bond-Rainbow x Haj.-Joan.) x Land.	37.4	33.0	42.0	40.0	31.0	37.0	39.0	47.0	36.0	45.0	32.0	40.0	37.0	33.0	32.0
2820	Columbia (ok)	36.9	32.0	42.0	42.0	29.0	36.0	40.0	42.0	37.5	46.0	31.0	38.0	37.0	34.0	30.0
6625	Columbia x Marion Mo. O4346	36.6	33.0	42.0	40.0	29.0	39.0	38.0	36.0	38.0	46.0	31.0	38.0	38.0	33.0	31.0
4170	Andrew (ok)	35.6	30.0	44.0	40.0	29.0	35.0	37.0	39.0	32.0	46.0	31.0	36.0	36.0	33.0	31.0
6925	(Col. x Vict.-Rich.) x Mindo	35.7	33.0	42.0	39.0	28.0	35.0	37.0	34.0	37.5	46.0	32.0	36.0	37.0	34.0	29.0
6701	Clintland	35.0	30.0	41.0	38.0	28.0	37.0	38.0	36.0	36.5	44.0	30.0	35.0	34.0	31.0	31.0
4672	Dupree	34.9	33.0	43.0	37.0	27.0	34.0	35.0	38.0	37.0	42.0	29.0	40.0	37.0	29.0	28.0
6926	(Col. x Marion) x Mindo	34.6	31.0	42.0	40.0	27.0	35.0	38.0	34.0	35.0	44.0	30.0	35.0	36.0	29.0	29.0
6620	Andrew x Landhafer	34.5	31.0	39.0	39.0	27.0	33.0	37.0	40.0	32.5	43.0	29.0	36.0	35.0	31.0	31.0
6621	Andrew x Landhafer	34.5	30.0	39.0	40.0	27.0	34.0	37.0	38.0	33.5	43.0	31.0	36.0	35.0	31.0	29.0
6639	Andrew x Landhafer	34.0	30.0	39.0	38.0	27.0	34.0	36.0	38.0	33.5	44.0	29.0	33.0	34.0	30.0	30.0
839	Kanota (ok)	33.9	30.0	38.0	39.0	26.0	29.0	39.0	42.0	32.0	42.0	30.0	37.0	37.0	25.0	29.0
4259	Clinton "59" (ok)	33.9	28.0	39.0	38.0	28.0	34.0	38.0	34.0	34.0	42.0	29.0	37.0	36.0	31.0	27.0
6927	Boine-Cartier x-Clinton	33.9	30.0	39.0	36.0	28.0	35.0	35.0	37.0	33.5	43.0	30.0	35.0	32.0	31.0	30.0
6644	Clinton ² x Ark. 674	33.8	29.0	38.0	38.0	28.0	36.0	35.0	41.0	31.5	43.0	29.0	33.0	33.0	30.0	28.0
6730	(Lee-Vict. x Fulwin) x Colo x Fultex	33.7	27.0	38.0	39.0	24.0	30.0	36.0	38.0	35.0	39.0	31.0	45.0	37.0	25.0	28.0
4301	Nemaha	33.4	31.0	38.0	36.0	26.0	33.0	36.0	38.0	34.0	41.0	29.0	33.0	35.0	29.0	28.0
6632	Andrew x Landhafer	33.3	28.0	38.0	37.0	27.0	34.0	36.0	39.0	33.0	42.0	29.0	34.0	33.0	29.0	27.0
5444	Cherokee Reselection	33.3	30.0	36.0	36.0	26.0	33.0	34.0	35.0	32.5	43.0	30.0	37.0	34.0	30.0	29.0
7029	Osage x (Bonda x HJ x SF)	30.9	27.0	34.0	33.0	25.0	33.0	32.0	36.0	26.0	43.0	27.0	34.0	31.0	27.0	24.0
3991	Osage (ok)	30.3	29.0	35.0	33.0	25.0	33.0	32.0	30.0	26.5	39.0	27.0	30.0	30.0	28.0	26.0

Table 45. Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Average 12 Stations												Percent												Blacksburg Va.
		Brownstown Ill.	Lafayette Ind.	Ames Iowa	Hays Kansas	Manhattan Kansas	Powhattan Kansas	Lexington Ky.	Beltsville Md.	Columbia Mo.	Lincoln Nebr.	New Brunswick ¹ N. J.	Columbus Ohio													
6701	Clinton	10.7	33	13	5	8	8	0	0	20	3	1	0	5												
6913	(Bond-Rainbow x Haj.-Joan.) x Land.	14.7	30	13	0	15	5	0	0	41	0	2	20	0												
6644	Clinton ² x Ark. 674	15.3	28	23	5	15	63	0	0	31	0	3	0	0												
4988	Mo. O-205	17.6	35	22	0	20	T	10	0	27	0	2	10	7												
4259	Clinton "59" (ck)	18.0	23	10	5	15	73	0	0	29	0	1	0	1												
6927	Boone-Cartier x Clinton	18.8	33	3	5	20	77	10	0	44	T	1	0	1												
4170	Andrew (ck)	20.0	37	24	0	25	0	10	0	43	0	2	21	0												
6925	(Col. x Vict.-Rich.) x Mindo	24.1	48	11	0	20	40	5	0	70	5	3	8	2												
4301	Nemaha	24.8	30	26	0	50	43	5	0	39	0	0	22	2												
5444	Cherokee Reselection	25.5	35	32	0	35	37	20	0	55	0	1	10	2												
6639	Andrew x Landhafer	28.7	60	57	0	15	13	40	0	59	0	2	7	3												
6625	Columbia x Marion Mo. 04346	31.5	53	38	0	45	50	5	0	45	4	5	40	8												
6632	Andrew x Landhafer	33.8	58	57	5	35	27	20	0	55	T	3	57	2												
7029	Osage x (Bonda x HJ x SF)	34.3	77	100	0	25	0	30	0	78	0	6	57	2												
3991	Osage (ck)	35.8	63	55	0	15	2	90	0	83	0	6	27	4												
6620	Andrew x Landhafer	36.5	62	97	0	40	17	10	0	70	0	4	40	2												
6926	(Col. x Marion) x Mindo	36.5	87	31	0	50	43	5	0	60	5	4	70	7												
6621	Andrew x Landhafer	39.9	70	97	0	35	17	10	0	75	T	5	72	3												
4672	Dupree	42.7	63	100	0	75	80	20	0	61	0	7	80	0												
2820	Columbia (ck)	46.3	67	100	35	30	87	5	0	63	22	5	75	8												
839	Kanota (ck)	49.2	77	95	30	100	93	10	0	51	17	7	47	10												
6730	(Lee-Vict. x Fulwin) x Colo x Fultex	60.3	85	98	40	95	90	5	15	97	33	5	73	13												

¹/Lodging recorded in classes. 0 = no lodging; 10 = 100% lodging. Not included in average.

Table 46. Date of heading on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Date														Average 14 Stations
		Akron Colo.	Brownstown Ill.	Lafayette Ind.	Ames Iowa	Hays Kansas	Manhattan Kansas	Beltsville Md.	Columbia Mo.	Lincoln Nebr.	Mt. Holly N. J.	New Brunswick N. J.	Stillwater Okla.	Denton Texas	Blacksburg Va.	
6927	Boone-Cartier x Clinton	5/28	5/26	5/30	6/2	5/25	5/22	6/2	5/21	5/26	5/30	6/1	5/19	5/12	5/28	
6925	(Col. x Vict.-Rich.) x Mindo	28	25	30	3	24	20	2	21	26	30	2	17	14	28	
6730	(Lee-Vict. x Fulwin) x Colo x Fultex	28	25	6/4	6	20	17	6	21	26	6/1	4	10	8	30	
4672	Dupree	29	25	5/31	3	24	21	7	22	26	1	3	17	7	29	
6620	Andrew x Landhafer	30	27	6/3	5	25	22	6	25	27	1	4	16	13	30	
6621	Andrew x Landhafer	30	27	3	6	25	22	6	25	26	1	5	16	12	30	
6639	Andrew x Landhafer	30	26	2	6	25	22	6	25	26	2	3	17	16	30	
4170	Andrew (ck)	30	27	2	4	27	22	8	22	26	1	4	20	13	30	
4301	Nemaha	30	27	1	3	27	23	8	24	26	1	6	15	12	29	
5444	Cherokee Reselection	30	28	5/31	3	26	23	7	23	26	1	4	18	13	30	
6926	(Col. x Marion) x Mindo	30	28	6/2	5	27	24	6	23	27	1	3	17	13	6/1	
6632	Andrew x Landhafer	31	26	2	5	26	24	6	25	27	1	3	23	15	5/30	
7029	Osage x (Bonda x HJ x SF)	31	27	1	6	27	22	9	25	28	2	6	17	11	31	
3991	Osage (ck)	31	28	1	8	28	25	8	25	30	2	6	17	14	6/1	
839	Kanota (ck)	31	30	7	11	23	20	9	23	29	2	5	12	10	5/30	
2820	Columbia (ck)	31	27	1	6	28	24	7	23	28	5/31	3	20	17	31	
6625	Columbia x Marion Mo. 04346	31	27	3	6	28	25	6	24	28	6/1	5	17	14	31	
6913	(Bond-Rainbow x Haj.-Joan.) x Land.	31	28	2	4	28	24	6	24	27	5/31	3	20	17	29	
6644	Clinton ² x Ark. 674	6/1	30	3	6	29	26	8	25	28	6/1	4	20	15	6/1	
4988	Mo. O-205	1	28	4	8	29	26	10	25	31	1	5	21	16	3	
4259	Clinton "59" (ck)	2	30	7	9	29	26	7	28	31	3	8	21	12	3	
6701	Clintonland	2	31	6	8	28	27	7	28	31	3	7	21	15	3	

Table 47. Date of ripening on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or cross	Average 3 Stations	Lincoln Nebr.	Stillwater Okla.	Denton Texas
Date					
6730	(Lee-Vict. x Fulwin) x Colo x Fultex	6/17	6/30	6/18	6/3
839	Kanota (ck)	18	28	16	9
4672	Dupree	19	30	21	4
6620	Andrew x Landhafer	20	7/1	19	10
4259	Clinton "59" (ck)	20	6/30	20	10
6644	Clinton ² x Ark. 674	21	30	23	10
4301	Nemaha	21	7/1	23	9
5444	Cherokee Reselection	21	6/30	22	11
2820	Columbia (ck)	21	28	22	13
6925	(Col. x Vict.-Rich.) x Mindo	21	30	21	12
6926	(Col. x Marion) x Mindo	21	7/1	21	9
6701	Clintland	21	6/30	20	13
6621	Andrew x Landhafer	22	7/2	22	12
6927	Beane-Cartier x Clinton	22	1	23	11
6625	Columbia x Marion Mo. 04346	22	6/30	23	11
6913	(Bond-Rainbow x Haj.-Joan.) x Land.	22	30	23	11
6632	Andrew x Landhafer	23	30	26	13
4170	Andrew (ck)	23	7/1	24	13
7029	Osage x (Bonda x HJ x SF)	23	1	24	13
3991	Osage (ck)	23	1	22	14
4988	Mo. 0-205	23	1	23	13
6639	Andrew x Landhafer	24	2	25	15

Table 48. Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or selection	Crown rust										Smut						Septoria	
		Lafayette		Ames Iowa		Manhattan	Kansas	Beltsville Md. 3/	Columbia Mo.	Stillwater Okla. 4/	Denton Texas	6/ Kansas			Columbia Mo.	Lincoln Nebr.	Ames	Iowa	
		%	Type	%	Type	%	Type	Reao.	%	Type	%	Reac.	%	%	%	%	%	Type	%
6620	Andrew x Landhafer	T	HR	8	20	MR	R	5	1	4/-/-	0	0	0	0	0	0	0	Int	30
6621	Andrew x Landhafer	35	HR	8	T	HR	Seg	5	5	4/-/-	0	0	0	0	0	0	0	S	30
6632	Andrew x Landhafer	T	HR	Seg	T	HR	R	5	1	0/0/0	0	0	0	0	0	0	0	S	40
6639	Andrew x Landhafer	25	HR	7	T	HR	Seg	5	2	4/-/-	0	0	0	0	0	0	0	S	30
4170	Andrew (ok)	100	CS	12	20	MR	S	10	3	4/-/-	0	0	0	0	0	0	0	S	30
6927	Boone-Cartier x Clinton	75	CS	20	40	MS	S	20	3	4/-/-	0	0	0	0	0	0	0	Int	40
6644	Clinton ² x Ark. 674 ⁴	25	RT&S	15	40	MS	S	20	4	0/0/0	0	0	0	0	0	0	0	Int	30
7029	Osage x (Bonda x H-J x Santa Fe)	15	R	8	T	HR	R	5	2	2-4/-/-	0	0	0	0	0	0	0	S	30
3991	Osage (ck)	100	CS	11	T	HR	R	10	3	4/-/-	0	0	0	0	0	0	0	S	30
839	Kanota (ck)	100	CS	25	100	S	S	30	4	4/05/100	25	0	0	0	0	0	0	Int	30
4259	Clinton 59 (ck)	100	CS	25	70	S	S	30	4	4/08/100	15	0	0	0	0	0	0	Int	30
4301	Nemaha	15	HR	15	30	MS	S	20	3	4/02/100	5	0	0	0	0	0	0	Int	30
5444	Cherokee Reselection	15	HR&CS	10	40	S	MS	10	4	4/02/100	0	0	0	0	0	0	0	Int	-
4672	Dupree	100	CS	10	20	S	S	25	3	4/01/100	0	0	0	0	0	0	0	Int	40
4988	Mo. 0-205	75	I-S	15	20	MR	S	10	3	4/T/100	0	0	0	0	0	0	0	S	20
2820	Columbia (ck)	100	CS	25	30	MS/S	S	30	4	4/T/100	0	0	0	0	0	0	0	Int	30
6625	Columbia x Marion Mo. 04346	75	I-S	25	10	MR	S	20	4	4/01/100	0	0	0	0	0	0	0	Int	30
6925	(Col. x Vict.-Rich.) x Minto	75	I-S	25	10	MS	Seg	20	4	4/T/80	30	0	0	0	0	0	0	S	40
6926	(Col. x Marion) x Minto	85	S-I	18	20	MS	S	20	4	4/T/100	0	0	0	0	0	0	0	S	40
6913	(Bond-Rain. x Haj.-Joan.) x Land.	T	HR	6	20	MR	R	5	1	0-4/T/T	0	0	0	0	0	0	0	S	40
6701	Clintonland	T	HR	4	T	HR	R	0	0	2-3/T/100	0	0	0	0	0	0	0	Int	-
6730	(Lee-Vict.xFulwin) x Colo x Fultex	75	S	25	90	S	S	0	0	4/20/100	0	0	0	0	0	0	0	Int	30

1/Readings from yield nursery inoculated with crown rust races 203 and 216.

2/Coef. of infection in disease nursery races 202, 203, 205, 216 and 258 used as inoculum.

3/Readings from nursery inoculated with crown rust races 203 and 258.

4/Dash marks indicate not enough rust, or leaves were too dry to make severity and prevalence readings.

5/No. of smutted heads in 16 ft. row inoculated.

6/Infection obtained by artificial inoculation.

Table 49. Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1955.

C.I. No.	Variety or selection	Stem rust												
		Lafayette	Ind.	Hayes	Beltsville	Columbia		Mo.	Lincoln	Stillwater	Denton	Blacksburg		
		%	Type	%	Type	%	Type	%	Type	%	Reac.	%	Type	
6620	Andrew x Landhafer	75	S	35	S	4	5	4	10	MS	4/05	25	CS	
6621	Andrew x Landhafer	75	S	40	S	4	7	4	5	MS	4/05	30	CS	
6632	Andrew x Landhafer	75	S	10	S	4	10	4	20	MR	2-4/T	20	I	
6639	Andrew x Landhafer	75	S	15	Seg	4	5	4	30	MS	2-4/T	25	S	
4170	Andrew (ck)	75	S	5	MR	3	3	4	15	R-MS	2-4/T	20	I	
6927	Boone-Cartier x Clinton	75	S	50	MS	4	3	3	1	S	4/02	50	CS	
6644	Clinton x Ark. 674	75	R	45	S	4	5	3	1	VS	4/15	25	CS	
7029	Osage x (Bonda x H-J x Santa Fe)	25	R	0	R	1	T	2	1	R	1-2/T	0	R	
3991	Osage (ck)	75	S	T	S	4	10	4	30	R	2-4/T	T	I	
839	Kanota (ck)	75	CS	55	S	4	5	4	5	S	4/35	10	CS	
4259	Clinton 59 (ck)	75	CS	60	S	4	5	3	1	VS	4/50	25	S	
4301	Nemaha	75	S	25	S	3	1	4	5	S	4/30	20	CS	
5444	Cherokee Reselection	75	S	40	S	4	1	3	1	S	4/10	40	CS	
4672	Dupree	75	S	20	S	3	1	3	T	MS	4/10	30	CS	
4988	Mo. O-205	50	S	T	S	4	5	4	10	R	4/T	15	R	
2820	Columbia (ck)	90	CS	65	S	3	10	4	20	MS	4/15	20	CS	
6625	Columbia x Marion Mo. 04346	95	CS	T	S	4	15	4	20	MR	4/T	10	I	
6925	(Col. x Vict.-Rich.) x Mindo	50	S	35	MS	3	5	4	T	S	4/10	15	S	
6926	(Col. x Marion) x Mindo	75	S	25	S	4	5	4	5	MR	4/15	5	CS	
6913	(Bond-Rain. x Haj.-Joan.) x Land.	25	HR	0	R	0	0	4	T	R	1-2/T ^{3/}	30	R	
6701	Clintonland	75	S	65	S	-	-	4	2	VS	4/25	25	CS	
6730	(Lee-Vict. x Fulwin) x Colo x Fultex	75	CS	80	Dry	-	-	4	10	S	4/65	20	CS	

^{1/}Readings from nurseries inoculated with races 7A and 8.

^{2/}Prevalence of stem rust = 100%.

^{3/}Segregating for susceptible stem rust types. Susceptible types removed.

SOUTHERN REGION

In 1955 winter conditions were not exceptionally severe in the South although a dry fall season in many areas had resulted in oats going into the soil under unfavorable conditions. The increased use of fall sown oats for pasture purposes in the South has been a potent factor in the greatly expanded acreage of the crop and the dry fall was very unfortunate because it delayed fall growth so much that as a result it reduced the pasturage return therefrom. In the more northern winter oat areas moisture conditions were more favorable and oats came up to reasonably good stands. Except in the northern Texas-Oklahoma area spring moisture conditions were comparatively favorable but droughty conditions continued there until well into the spring. This resulted in a short crop.

Serious damage to fall sown oats resulted in 1955 when a sudden thrust of unusually cold weather occurred in late March which carried temperatures well below freezing as far south as Florida. Oats in much of the Delta and Gulf coastal areas were consequently caught in the jointing stage and were frozen to the ground. Oats farther north while injured severely, damage was less than farther South because the plants were not as yet in such a critical stage of development. As a result oat yields in the greater part of the old "Cotton Belt" area were low and such yields as were obtained were harvested from "second growth" culms. Such growth was late in maturing and less than average in productivity.

It was extremely fortunate that rust was of little moment in the South in 1955. Had rust been as prevalent as usual the late growth would have been destroyed. Comparatively little damage from rust was observed anywhere. Thus whereas the forage or pasturage return on fall sown oats in 1955 was far below average, the average grain yields were not so low as might have been anticipated. However they were less than usual and only because of the favorable factors; lack of rust with cool spring temperature with ample moisture in most sections was a near complete failure of fall sown oats averted in many areas.

As in the past several years, three regional fall-sown yield nurseries were grown in 1955. These were: (1) The Uniform Special Winter Oat Nursery; (2) The Uniform Fall Sown Oat Nursery; and (3) The Uniform Florida-Gulf Coast Oat Nursery. The general area in which each is grown coincided rather closely with the temperature belts of the country. The Special being grown in the colder area and the Florida-Gulf Coast nursery in the extreme South whereas the Fall Sown Nursery was grown in the central area. The results from each nursery will be discussed separately in this report.

In the fall of 1955 a rearrangement of the fall-sown agronomic nurseries was effected. By this new arrangement the Special Winter Oat Nursery remains virtually the same except it will now be called the Uniform Northern Winter Oat Experiment. The former Uniform Fall Sown Oat Experiment has been changed. Previously yield data from the more northern stations where winterkilling frequently is observed were summarized separately from those more southern stations where oats rarely winter kill. In the proposed new arrangement the more northern stations that previously grew the Fall Sown Nursery will be considered as being located in the Central Area and will grow the Uniform Central Area Winter Oat Experiment whereas the more southern stations will be included together with those previously growing in the Florida-Gulf Coast oat experiment in the new Uniform Southern Winter Oat Experiment. Thus for 1956 the three fall-sown agronomic oat nursery experiments will be as follows:

1. Uniform Northern Winter Oat Experiment
2. Uniform Central Area Winter Oat Experiment
3. Uniform Southern Winter Oat Experiment

Uniform Special Winter Oat Experiment

This nursery now grown for 8 years has become the most widely grown of any included in the National program. In 1955 nurseries were grown from Rhode Island and Massachusetts in the East to Mt. Vernon and Vancouver, Washington, and Corvallis, Oregon, on the West Coast. Seed of new entries for sowing 27 nurseries was prepared and mailed out in the fall of 1954. The 27 stations were as follows:

Ark. - Fayetteville
Del. - Newark
Georgetown
Ill. - Brownstown
Carbondale
Ind. - Princeton
Kans. - Hutchinson
Mound Valley
Ky. - Lexington
Hopkinsville
Md. - Beltsville
Mass. - Feeding Hills
Mo. - Pierce City
Sikeston

N. J. - New Brunswick
Okla. - Stillwater
Oreg. - Corvallis
Penna. - University Park (State College)
R. I. - Kingston
Tenn. - Knoxville
Tex. - Chillicothe
Va. - Blacksburg
Wash. - Vancouver
Mt. Vernon
W. Va. - Morgantown
Wardensville
Pt. Pleasant

In addition seed for sowing observation or hardiness nurseries was sent to Aberdeen, Idaho, Urbana, Ill., Lafayette, Ind., Columbia, Mo., and for conducting disease nurseries at Beltsville, Md., Statesville, N. C., and Experiment, Ga. As no one was present to conduct rust tests at Gainesville, Fla., that disease nursery was omitted in 1955.

The season of 1954-55 was less favorable than usual due to the late March freeze which destroyed the nursery on a number of stations. The nursery at Pt. Pleasant, W. Va. and that at Sikeston, Mo. lodged so severely they were not harvested. As a consequence no data are available on some 8 of the nurseries for which seed was supplied. As many of these nurseries are grown in areas where the most hardy fall sown oats frequently do not survive the winter, the number of nurseries lost in 1954-55 was not too surprising considering the season.

This nursery included 18 entries in 1955. Three of these, Stanton, Okla. Strain, C.I. 6902; Ballard, Ky. Sel. 45-34, C.I. 6905; and C.I. 6979, Fulgrain Strain 6 x Forkedeer were new entries. All others had been grown previously and the previous checks Lee and Wintok were continued.

Data on the derivation of entries in the Special Winter Oat Nursery appear in Table 50 and summary data are included in Table 51. Data from individual stations appear in Tables 52 to 62, inclusive.

Yield, Bushels per Acre

Data on yields of entries in this experiment were received from 18 stations. The highest yielding entry on the average was C.I. 6904 and the poorest yielder Early Wintok. The former averaged 67.3 bushels whereas the latter averaged only 51.7 bushels per acre on the 18 stations reporting. Forkedeer averaged 65.3 and Lee check 60.0 bushels per acre respectively. Very high yields were harvested at Beltsville and many entries yielded well at Brownstown, Morgantown and Wardensville. The poorest yields were reported from Stillwater, Okla. and Knoxville, Tenn. At Feeding Hills, Mass. and University Park, Penna. both points far to the north of where winter oats usually have been considered a safe crop, fair yields were obtained in 1955. At Feeding Hills, the highest yielding entry, C.I. 6571, averaged 51.6 bushels per acre and LeConte, an oat lacking sufficient hardiness for such more northern areas averaged only 12.1 bushels per acre whereas at University Park, C.I. 6904 averaged highest 69.5 bushels per acre and LeConte averaged lowest, 16.9 bushels. The lack of hardiness of LeConte doubtless explains its low yield, which was only 0.2 bushels, above the bottom yielder in this nursery in 1955.

Winter Survival

Data on winter survival were supplied by only 9 stations. All entries survived 100 percent at Georgetown and Newark, Del.; Carbondale, Ill.; Hopkinsville and Lexington, Ky. and all were killed at Fayetteville, Ark.; Urbana, Ill.; Kingston, R. I.; Mound Valley and Hutchinson, Kansas; and Chillicothe, Texas. As might have been expected Wintok and Early Wintok survived best. The latter averaged 87.0 percent whereas Wintok ranking next averaged 85.8 percent. The poorest survival percentages were recorded for LeConte, 57.7 percent, Lemont Cross, 58.5 and C.I. 6979, 66.6 percent. Lee Check survived 68.7 percent hence these three oats are not equal to Lee in hardiness and their value for fall seeding to the north of the Mason-Dixon line is open to question as Lee has not been too satisfactory in hardiness to the north of the Maryland line.

Dubois survived 76.5 percent or ranked sixth in hardiness in this nursery in 1955.

Test Weight

A total of 15 stations reported data on test weights. Dubois ranked first with an average of 34.4 pounds per bushel followed by Forkeddeer which averaged 34.3 pounds and C.I. 6903, 34.1. Only two entries, C.I. 6901 and Stanton Strain averaged below 32 pounds per bushel. Lee Check averaged 34.0 pounds per bushel. On the average test weights were lower in 1955 than in 1954. This likely resulted in part from the oats having been killed back and the yields from secondary tillers making up a considerable percentage of the crop harvested on many stations.

Groat Percentage

Percentage of groat to total kernel weight was determined at West Springfield, Mass. Weights of 1000 kernels ranged from 39 grams for C.I. 6979 to only 26.7 grams for Early Wintok whereas percent of groat ranged from 79.3 percent for Early Wintok to 74.2 percent for C.I. 6979. Groat percentages in oats in this nursery were on the average higher than those recorded for spring sown oats grown at Aberdeen, Idaho, and for most oats grown from spring seeding in the Northeastern or the North Central regions.

Plant Height

Data on plant height were received from 14 stations. Oats grew tallest at Carbondale, Beltsville, Brownstown and Georgetown and shortest at Stillwater, Okla., and Feeding Hills, Mass. The tallest entry in 1955 was Ballard which averaged 39.3 inches followed by Lemont Cross, 37.5 and Lee check and Stanton Strain, each of which averaged 36.6 inches tall. Average heights in 1955 were about the same as in 1954.

Standing Ability

Notes on lodging were received from 13 stations in 1955. Lodging was severe at Newark, Carbondale, Hopkinsville, Beltsville and Knoxville. At Corvallis lodging was expressed in type hence the overall averaged is for only 12 stations. The stiffest strawed entry in 1955 was Dubois which lodged 24.5 percent. LeConte ranked second. Early Wintok which lodged 61.1 and Ballard which lodged 59.5 percent were the weakest strawed entries in the 1955 nursery.

Date Headed

A total of 14 stations reported on date of heading. Except for Feeding Hills, nearly all entries in all nurseries reported indicated heading occurred in May. On the average the earliest entries were Cimarron, Early Wintok and Stanton Strain which headed May 10, May 11 and May 13 respectively. Lee headed May 18 and Dubois May 16.

Date Ripe

Only 4 stations reported on date ripe. At Stillwater oats ripened in May and at Feeding Hills in July. The first entries to ripen were Early Wintok and Cimarron, June 11. Lee ripened June 18 and C.I. 6904 the latest entry ripened June 20.

Reaction to Disease

Data on crown rust infection were reported from 3 points, stem rust from 2 and smut from one. C.I. No's. 6717, 6901 and 6904 were most resistant to crown rust. No entry was really resistant to stem rust and no smut infections or only light infections were noted in any entry.

Forage Value and Type of Growth

A total of 10 estimates of forage growth were received; 6 in the fall and 4 in the spring. In the fall Cimarron ranked first with an average of 104.8 compared with LeConte poorest with an average of 91.3 percent of the check. In the spring also Cimarron ranked first with an average of 108.8 and C.I. 6917 last with an average of 84.8 percent.

Only 3 stations reported on growth type and as a result the data are not of too much significance. LeConte and Cimarron were termed decumbent in all 3 nurseries and no entry was classed as upright in more than one test.

Table 50. Entries included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or hybrid	Selection	Seed source
2042	Lee (ok)	Winter Turf x Aurora	Va. (ok)
3170	Forkedeer	Winter Fulghum Sel. Tenn. 092	Tenn.
3424	Wintok	Hairy Culberson x Fulghum, CI 2500; Okla. 1-32-1446	Okla.
4600	Coy	Lee-Victa. x Fulwin Resel. 5346 of CI 4316	U.S.D.A.
4660	Mustang	(Lee-Victoria) x Fulwin: Tex. Sel. 3770-9	Tex.
5106	Cinaxxon	Woodward Composite Sel.: Okla. 472606	Okla.
5107	LeConte	Tenn. 138-14-427-1: Tennex x Bond	Tenn.
5849	Early Wintok Selection	Okla. 492825	Okla.
6571	(Lee-Victoria) x Fulwin	Tex. Sel. 3770-7	Tex.
6572	Dubois	Clinton x Forkedeer: Purdue 4011-4-92	Ind.
6717	(Lee-Victoria) x Fulwin	Tex. Sel. 3770-1	Tex.
6718	Lemont Cross	Lemont x (CI 4001 x CI 3644): Md. 2841-2	U.S.D.A.
6901	(Lee-Victoria) x Fulwin	Tex. Sel. 3770-27	Tex.
6902	Stanton: Okla. Str.	Selection from Stanton	Okla.
6903	(Lee-Victoria) x Forkedeer	Purdue 392A2-13-1-2-1	Ind.
6904	(Lee-Victoria) x Forkedeer	Purdue 392A2-28-5	Ind.
6905	Ballard	Ballard: Ky. Sel. 45-34	Ky.
6979	Fulgrain Str. 6 x Forkedeer	Tenn. Sel. 17-410-76	Tenn.

Table 51. Summary of data obtained on the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or Selection	Acre Yield (18 Sta.) Bu.	Survival (9 Sta.) %	Test Wt. (15 Sta.) Lbs.	Plant Ht. (14 Sta.) Ins.	Lodging (12 Sta.) %	Date Head (14 Sta.)	Date Ripe (4 Sta.)	Forage Rating 1/ Fall Spring (6 Sta.) (4 Sta.) %	Type Growth (3 Sta.) 2
6904	(Lee-Victoria) x Forkeddeer	67.3	74.4	32.2	33.1	35.8	5/20	6/20	94.3 97.3	0-3-0
6717	(Lee-Victoria) x Fulwin: 3770-1	66.1	74.4	33.0	32.7	32.5	19	19	93.5 84.8	1-2-0
6902	Stanton: Okla. Str.	65.4	75.1	31.7	36.6	41.3	13	15	96.0 104.3	0-3-0
3170	Forkeddeer	65.3	74.4	34.3	36.5	53.4	16	15	95.5 102.3	2-1-0
6903	(Lee-Victoria) x Forkeddeer	64.9	79.7	34.1	34.9	29.5	19	18	98.0 101.8	1-2-0
6905	Ballard: Ky. Sel. 45-34	62.7	80.8	32.6	39.3	59.5	16	16	95.3 97.0	2-1-0
6572	Dubois	62.5	76.5	34.4	34.4	24.5	16	16	99.7 97.0	2-1-0
6571	(Lee-Victoria) x Fulwin: 3770-7	61.8	75.3	32.8	36.3	36.1	19	19	85.3 94.3	1-2-0
6979	Fulgrain Str. 6 x Forkeddeer	61.7	66.6	33.8	34.5	31.7	15	16	97.2 102.3	0-2-1
4660	Mustang	61.2	69.2	32.0	33.9	36.1	16	17	98.5 102.8	2-1-0
4600	Coy	60.7	69.0	32.9	34.6	32.9	14	17	101.2 102.3	1-1-1
2042	Lee	60.0	68.7	34.0	36.6	36.6	18	18	100.0 100.0	1-1-1
5106	Cimarron: Woodward Comp. Sel. 3	60.0	78.3	32.0	31.6	56.2	10	11	104.8 108.8	2-1
6718	Lemont Cross	58.6	58.5	33.9	37.5	39.6	15	16	98.8 103.0	0-3-0
3424	Wintok	58.3	85.8	33.7	34.1	50.8	15	13	95.5 102.5	3-0-0
6901	(Lee-Victoria) x Fulwin: 3770-27	58.3	73.9	31.0	34.7	40.6	14	16	100.8 92.0	1-2-0
5107	LeConte	51.9	57.7	33.1	35.4	28.1	19	19	91.3 93.8	3-0-0
5849	Early Wintok	51.7	87.0	33.4	33.5	61.1	11	11	94.2 98.0	2-1-0

1/ Based on Lee = 100%
 2/ 1 - Decumbent, 2 - Intermediate, 3 - Upright.
 3/ All entries were susceptible to crown rust
 and Cimarron only was probably a little less
 susceptible to stem rust.

Table 52. Yields on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or cross	Bushels																W. Va. Morgantown	W. Va. Wardensville										
		Average 18 Stations	Del.	Georgetown	Del.	Newark	Brownstown	Ill.	Carbondale	Ill.	Princeton	Ind.	Hopkinsville	Ky.	Lexington	Md.	Feeding Hills			Mass.	Pteroe City	Mo.	New Brunswick	N. J.	Stillwater	Okla.	Corvallis	Ore.	Univ. Park
6904	{ Lee-Vic } x Forkeddeer	67.3	62.6	51.3	106.0	73.9	89.2	57.7	81.0	96.5	35.4	70.5	84.3	29.9	46.8	69.5	10.7	62.6	87.5	96.6									
6717	{ Lee-Vic } x Fulwin: 3770-1	66.1	77.6	49.3	86.6	76.6	90.7	50.1	90.0	105.6	35.2	65.3	70.3	36.2	41.1	53.9	28.9	60.9	69.9	100.8									
6902	Stanton: Okla. Str.	65.4	86.1	62.6	109.4	62.4	88.3	36.3	85.1	132.7	29.7	55.8	72.7	15.8	21.6	51.7	18.5	56.3	83.3	108.7									
3170	Forkeddeer	65.3	76.2	34.7	100.2	72.4	91.1	46.4	78.1	116.5	42.7	58.3	82.9	21.7	36.7	50.1	20.2	71.2	93.2	82.5									
6903	{ Lee-Vic } x Forkeddeer	64.9	76.8	55.4	108.1	70.5	71.5	47.8	76.6	113.1	49.9	54.1	70.0	20.6	36.4	45.4	27.3	80.9	86.6	77.5									
6905	Ballard: Ky. Sel. 45-34	62.7	71.3	52.3	68.2	68.8	81.2	29.4	63.6	119.4	47.6	54.3	76.1	20.0	43.9	45.5	28.0	66.3	104.9	83.5									
6572	Dubois	62.5	71.5	41.6	107.2	66.0	76.0	60.4	80.0	107.2	40.1	60.6	66.9	13.9	31.5	37.3	19.0	54.3	91.3	100.5									
6571	{ Lee-Vic } x Fulwin: 3770-7	61.8	70.5	46.5	86.8	70.7	85.9	55.9	87.4	78.3	51.6	53.7	78.6	36.6	41.2	53.4	33.8	42.9	55.3	84.1									
6979	Fulgrain Str. 6 x Forkeddeer	61.7	95.6	66.8	93.3	58.9	75.6	61.4	83.6	112.2	16.2	57.4	94.4	12.8	31.5	31.2	27.2	43.5	58.0	91.2									
4660	Mustang	61.2	90.0	57.6	89.4	63.3	88.7	34.5	65.2	115.5	26.7	57.0	82.3	32.8	41.8	59.9	23.1	42.6	50.7	79.9									
4600	Coy	60.7	82.7	49.3	84.6	70.2	87.7	52.5	76.4	95.7	21.3	50.4	71.8	23.2	38.9	54.2	26.4	47.8	89.2	69.9									
2042	Lee (ck)	60.0	66.6	49.0	78.0	59.8	63.7	48.9	79.2	127.5	46.2	60.6	72.0	19.9	28.5	40.5	37.9	40.7	61.0	99.7									
5106	Cimarron: Woodward Comp. Sel.	60.0	77.4	60.0	118.5	68.8	72.1	39.6	61.6	104.7	43.4	48.6	91.7	16.4	17.1	48.4	28.9	62.5	68.7	51.7									
6718	Lemont Cross	58.6	87.6	63.4	74.4	61.9	104.3	42.0	63.0	115.9	24.8	46.4	64.5	31.2	37.5	50.5	6.6	32.7	60.3	88.5									
3424	Wintok	58.3	66.2	32.2	86.4	53.7	62.0	38.3	74.1	112.5	43.6	51.4	74.9	18.4	31.2	57.4	14.0	76.0	84.3	73.5									
6901	{ Lee-Vic } x Fulwin: 3770-27	58.3	78.5	54.2	78.0	65.1	82.8	34.2	68.7	96.7	30.2	54.1	63.3	18.1	36.8	55.2	23.9	57.3	83.9	68.3									
5107	LeConte	51.9	61.4	45.3	90.1	60.7	65.4	50.0	74.4	112.5	12.1	59.1	60.7	18.4	27.6	16.9	20.6	38.8	75.2	44.1									
5849	Early Wintok	51.7	58.0	42.4	84.5	60.5	68.1	28.3	61.0	67.8	43.2	28.9	89.8	9.8	28.5	54.9	14.8	72.6	66.4	51.7									

Table 53. Survival on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55. ^{1/}

C.I. No.	Variety or cross	Percent									
		Average 9 Stations	Brownstown Ill.	Princeton Ind.	Mound Valley Kansas	Beltsville Md.	Feeding Hills Mass.	Columbia Mo.	New Brunswick N. J.	Univ. Park Pa.	Blacksburg Va.
5849	Early Wintok	87.0	100.0	85	96	94.2	85	68	97	68	90
3424	Wintok	85.8	96.2	85	94	97.3	71	78	94	68	89
6905	Ballard: Ky. Sel. 45-34	80.8	95.0	88	99	97.2	67	65	94	38	84
6903	(Lee-Vic) x Forkedeer	79.7	96.2	88	96	92.9	48	60	96	50	90
5106	Cimarron: Woodward Compl. Sel.	78.3	92.5	75	81	97.2	70	60	94	47	88
6572	Dubois	76.5	91.2	90	91	94.4	48	63	92	33	86
6571	(Lee-Vic) x Fulwin: 3770-7	75.3	85.0	90	99	83.7	60	55	85	50	70
6902	Stanton: Okla. Str.	75.1	97.5	88	85	96.1	26	65	91	53	74
6717	(Lee-Vic) x Fulwin: 3770-1	74.4	87.5	90	98	85.1	35	58	92	43	81
6904	(Lee-Vic) x Forkedeer	74.4	82.5	85	91	89.0	24	53	91	68	86
3170	Forkedeer	74.4	95.0	93	89	93.6	45	2/	95	35	83
6901	(Lee-Vic) x Fulwin: 3770-27	73.9	76.2	88	92	84.6	41	53	90	57	83
4660	Mustang	69.2	82.5	85	74	86.5	24	55	90	53	73
4600	Coy	69.0	83.7	83	90	81.4	10	48	89	58	78
2042	Lee (ok)	68.7	76.2	78	82	96.5	41	45	90	30	80
6979	Fulgrain Str. 6 x Forkedeer	66.6	73.7	85	84	100.0	11	58	85	30	73
6718	Lemont Cross	58.5	58.7	83	61	86.8	10	40	80	37	70
5107	LeConte	57.7	51.2	90	79	84.7	7	40	81	17	68

^{1/}100% survival was reported at Georgetown, Del.; Newark, Del.; Carbondale, Ill.; Hopkinsville, Ky. and Lexington, Ky. All entries were winterkilled at Fayetteville, Ark.; Urbana, Ill.; Kingston, R. I.; Hutchinson, Kansas; and Chillicothe, Texas.

^{2/}Average of station (40.8) substituted for missing data.

Table 54. Test weights on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or cross	Average 15 Stations	Del. Georgetown	Del. Newark	Brownstown Ill.	Carbondale Ill.	Princeton Ind.	Hopkinsville Ky.	Lexington Ky.	Beltzville Md.	Feeding Hills Mass.	Pierce City Mo.	New Brunswick N. J.	Stillwater Okla.	Corvallis Ore.	Univ. Park Pa.	Blacksburg Va.
6572 Dubois		34.4	33.8	30.9	37.1	38.0	37.9	35.5	38.6	31.0	35.0	34.5	31.2	22.0	38.0	36.0	35.8
3170 Forkedeer		34.3	34.9	32.3	35.6	36.8	36.9	32.8	36.8	32.0	36.5	35.0	32.8	21.6	39.0	35.8	35.4
6903 (Lee-Vic) x Forkedeer		34.1	33.1	32.7	35.4	37.0	35.1	35.5	38.4	32.0	36.0	34.0	33.2	18.5	38.0	35.8	36.4
2042 Lee (ck)		34.0	33.7	32.1	36.7	39.0	33.5	35.6	38.0	31.5	34.5	34.5	33.2	19.7	38.0	35.9	2/
6718 Lemont Cross		33.9	33.4	32.4	37.4	36.9	38.9	34.9	36.0	33.5	32.5	34.5	28.5	24.9	35.0	35.3	2/
6979 Fulgrain Str. 6 x Forkedeer		33.8	34.6	32.5	35.8	35.3	36.5	33.3	36.7	31.0	36.0	32.5	32.0	23.0	36.0	36.6	35.0
3424 Wintok		33.7	33.9	32.9	35.8	35.1	33.2	34.2	36.0	34.0	35.5	33.0	32.8	21.5	37.0	35.7	34.3
5849 Early Wintok		33.4	32.9	32.9	33.7	36.5	36.4	33.2	35.9	32.0	35.0	32.0	31.0	25.0	35.0	35.1	33.7
5107 LeConte		33.1	33.0	31.9	35.7	39.7	36.7	33.3	30.6	31.5	33.0	32.0	29.5	19.6	37.0	1/	37.7
6717 (Lee-Vic) x Fulwin: 3770-1		33.0	32.7	30.4	32.7	36.5	34.5	32.9	36.0	29.5	34.0	33.0	29.5	23.4	39.0	35.6	35.2
4600 Coy		32.9	33.1	31.9	33.5	38.1	35.6	32.1	36.7	32.0	33.0	32.0	27.0	22.5	37.0	35.0	34.4
6571 (Lee-Vic) x Fulwin: 3770-7		32.8	32.8	30.1	31.4	36.4	33.9	32.1	35.8	30.0	35.0	32.0	29.0	22.9	39.0	36.0	35.2
6905 Ballard: Ky. Sel. 45-34		32.6	32.5	30.5	31.6	34.2	34.6	31.4	34.6	31.5	36.5	32.0	31.0	21.0	38.0	34.7	34.2
6904 (Lee-Vic) x Forkedeer		32.2	31.9	30.3	34.1	35.1	34.0	32.0	35.1	27.5	34.0	31.0	31.5	20.8	37.0	34.8	34.6
4660 Mustang		32.0	31.6	30.4	32.3	34.7	34.5	30.3	34.3	31.5	31.5	33.5	29.0	23.5	35.0	35.6	32.5
5106 Cimarron: Woodward Compl. Sel.		32.0	33.1	29.5	32.7	33.5	33.0	32.1	33.8	31.5	35.0	31.0	30.0	30.5	29.0	34.1	30.7
6902 Stanton: Okla. Str.		31.7	31.2	30.5	33.1	34.4	34.9	31.3	34.2	32.5	34.0	30.0	28.0	21.6	33.0	34.4	32.6
6901 (Lee-Vic) x Fulwin: 3770-27		31.0	31.0	28.7	31.7	34.9	33.5	31.1	33.3	27.0	33.0	32.5	25.5	23.0	34.0	34.8	31.6

1/Average of station (35.4) substituted for missing data.

2/Average of station (34.3) substituted for missing data.

Table 55. Plant heights on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or cross	Inches														Average 14 Stations	Del. Georgetown	Del. Newark	Brownstown Ill.	Carbondale Ill.	Princeton Ind.	Hopkinsville Ky.	Lexington Ky.	Beltsville Md.	Feeding Hills Mass.	Pleoce City Mo.	New Brunswick N. J.	Stillwater Okla.	Corvallis Ore.	Blacksburg Va.			
5106	Cimarron: Woodward Comp. Sel.	31.6	35	36	40	37.2	34	28	27	40	26	30	25	17	35	32	(Lee-Vic) x Fulwin: 3770-1	(Lee-Vic) x Forkedeer	Early Wintok	Mustang	Wintok	6572 Dubois	6979 Fulgrain Str. 6 x Forkedeer	4600 Coy	(Lee-Vic) x Fulwin: 3770-27	(Lee-Vic) x Forkedeer	LeConte	(Lee-Vic) x Fulwin: 3770-7	Forkedeer	Lee (ck)	Stanton: Okla. Str.	Lemont Cross	Ballard: Ky. Sel. 45-34
6717	(Lee-Vic) x Fulwin: 3770-1	32.7	36	35	44	44.0	41	33	34	42	30	31	26	27	38	31																	
6904	(Lee-Vic) x Forkedeer	33.1	34	43	43	39.7	36	28	31	37	29	30	22	25	36	30																	
5849	Early Wintok	33.5	37	34	42	42.2	37	28	31	39	29	31	28	18	40	33																	
4660	Mustang	33.9	40	33	42	39.7	40	28	29	42	28	34	27	24	37	31																	
3424	Wintok	34.1	36	35	42	41.0	41	24	36	40	32	31	24	23	40	33																	
6572	Dubois	34.4	40	36	42	42.0	38	28	33	42	30	33	25	22	39	32	(Lee-Vic) x Fulwin: 3770-7	Forkedeer	Lee (ck)	Stanton: Okla. Str.	Lemont Cross	Ballard: Ky. Sel. 45-34											
6979	Fulgrain Str. 6 x Forkedeer	34.5	39	39	41	40.0	39	30	34	39	28	33	26	23	41	31																	
4600	Coy	34.6	42	37	48	46.0	42	30	36	42	31	35	29	28	44	32																	
6901	(Lee-Vic) x Fulwin: 3770-27	34.7	37	35	45	43.0	39	30	35	40	30	35	23	23	39	32																	
6903	(Lee-Vic) x Forkedeer	34.9	40	38	45	44.0	39	28	34	40	30	33	24	26	36	32																	
5107	LeConte	35.4	37	35	49	44.2	41	34	34	41	27	32	25	26	39	31																	
6571	(Lee-Vic) x Fulwin: 3770-7	36.3	46	38	43	42.7	41	33	34	40	33	32	27	27	40	32	3170 Forkedeer	2042 Lee (ck)	6902 Stanton: Okla. Str.	6718 Lemont Cross	6905 Ballard: Ky. Sel. 45-34												
3170	Forkedeer	36.5	42	39	44	44.5	43	30	30	42	32	34	28	25	43	34																	
2042	Lee (ck)	36.6	42	38	45	43.7	40	32	38	42	30	36	27	26	40	32																	
6902	Stanton: Okla. Str.	36.6	46	37	46	44.2	42	28	35	44	29	35	27	24	43	32																	
6718	Lemont Cross	37.5	43	34	47	45.5	44	33	36	44	33	35	26	29	45	31																	
6905	Ballard: Ky. Sel. 45-34	39.3	47	40	49	48.7	44	34	35	42	35	37	31	25	47	36																	

Table 56. Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or cross	Average 12 Stations	Georgetown Del.	Newark Del.	Brownstown Ill.	Carbondale Ill.	Hopkinsville Ky.	Lexington Ky.	Beltsville Md.	Pierce City Mo.	New Brunswick N. J. 1/	Corvallis Ore.	Univ. Park Pa.	Knoxville Tenn.	Blacksburg Va.
												Percent			
6572	Dubois	24.5	0	5	5.0	3.8	100	0	92	8	0	3.0	8	90	6
5107	LeConte	28.1	0	65	2.0	6.3	100	5	60	8	0	2.0	0	60	2
6903	(Lee-Vic) x Forkedeer	29.5	0	75	2.0	11.2	90	0	70	8	1	2.0	5	90	1
6979	Fulgrain Str. 6 x Forkedeer	31.7	0	95	1.0	0.0	95	0	85	8	1	2.0	3	90	1
6717	(Lee-Vic) x Fulwin: 3770-1	32.5	0	15	9.4	31.2	100	0	95	12	0	3.0	28	90	6
4600	Coy	32.9	0	20	25.0	5.0	95	0	95	13	1	2.5	40	90	9
6904	(Lee-Vic) x Forkedeer	35.8	0	85	1.0	10.0	100	5	78	16	0	3.0	33	90	8
6571	(Lee-Vic) x Fulwin: 3770-7	36.1	0	80	10.0	47.5	95	0	78	13	1	2.0	13	90	5
4660	Mustang	36.1	0	80	21.5	3.8	100	0	95	17	1	2.5	20	90	3
2042	Lee (ok)	36.6	0	35	20.6	52.5	90	0	95	13	1	2.0	35	90	6
6718	Lemont Cross	39.6	0	70	27.2	57.5	100	5	78	10	1	2.0	35	90	1
6901	(Lee-Vic) x Fulwin: 3770-27	40.6	0	60	11.8	58.7	100	10	95	19	0	3.0	30	90	10
6902	Stanton: Okla. Str.	41.3	0	90	14.0	42.5	95	0	95	22	2	3.5	30	95	8
3424	Wintok	50.8	0	90	33.1	98.7	100	20	95	29	1	3.5	43	90	7
3170	Forkedeer	53.4	0	85	28.1	82.5	100	65	87	27	4	4.0	58	95	9
5106	Cimarron: Woodward Comp. Sel.	56.2	0	85	7.5	100.0	100	85	95	33	3	2.5	68	90	4
6905	Ballard: Ky. Sel. 45-34	59.5	0	85	64.4	98.7	100	95	95	31	6	3.0	33	90	19
5849	Early Wintok	61.1	5	65	69.4	100.0	100	35	95	51	5	4.0	78	80	21

1/ Lodging recorded in classes. 0 = no lodging; 10 = 100% lodged. Not included in average.

Table 57. Date of heading on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or cross	Average 14 stations	Del. Newark	Brownstown Ill.	Carbondale Ill.	Mount Valley Kansas	Lexington Ky.	Beltville Md.	Feeding Hills Mass.	Pierce City Mo.	New Brunswick N. J.	Stillwater Okla.	Cottails Ore.	Knoxville Tenn.	Blacksburg Va.	Morganstown W. Va.
									Date							
5106	Cimarron: Woodward Comp. Sel.	5/10	5/19	5/10	5/3	4/19	5/9	5/13	5/31	5/3	5/18	4/27	5/20	4/28	5/15	5/15
5849	Early Wintok	11	19	9	1	22	8	20	31	3	19	5/1	23	28	15	15
6902	Stanton: Okla. Str.	13	19	17	2	25	7	17	6/4	4	21	3	23	28	19	15
6901	(Lee-Vic) x Fulwin: 3770-27	14	20	19	4	25	8	20	4	3	21	3	22	5/5	20	16
4600	Coy	14	23	17	4	25	9	20	6	5	20	3	23	1	20	16
6718	Lemont Cross	15	23	17	5	27	8	19	6	6	20	5	23	5	23	16
6979	Fulgrain Str. 6 x Forkedeer	15	20	18	7	24	9	24	4	5	21	2	25	5	22	20
3424	Wintok	15	23	17	6	26	12	23	4	8	23	3	29	4/28	20	16
6572	Dubois	16	23	14	7	26	10	22	6	3	24	2	6/2	5/5	20	16
4660	Mustang	16	23	18	7	26	13	20	4	4	24	5	1	5	23	16
6905	Ballard: Ky. Sel. 45-34	16	23	20	7	27	12	22	3	6	23	4	5/29	1	21	20
3170	Forkedeer	16	20	18	7	26	14	23	4	3	23	6	6/1	1	21	21
2042	Lee (ck)	18	23	21	9	28	14	23	6	8	23	7	5/28	8	24	17
5107	LeConte	19	23	20	14	29	12	24	3	8	23	6	6/1	10	24	21
6571	{Lee-Vic} x Fulwin: 3770-7	19	25	22	9	28	14	25	8	4	25	7	6	8	23	17
6717	{Lee-Vic} x Fulwin: 3770-1	19	25	22	9	28	15	24	7	8	25	7	9	5	23	17
6903	{Lee-Vic} x Forkedeer	19	23	22	10	28	16	27	8	7	25	8	3	5	23	22
6904	{Lee-Vic} x Forkedeer	20	23	25	12	28	18	27	10	7	25	6	3	8	25	23

Table 58. Date of ripening on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 4 Stations	Carbondale Ill.	Beltsville Md.	Feeding Hills Mass.	Stillwater Okla.
		Date				
5106	Cimarron: Woodward Comp. Sel.	6/11	6/8	6/14	7/4	5/17
5849	Early Wintok	11	6	16	4	18
3424	Wintok	13	9	16	8	20
6902	Stanton: Okla. Str.	15	16	16	9	19
3170	Forkedeer	15	10	16	9	25
6572	Dubois	16	12	17	10	23
6718	Lemont Cross	16	10	17	10	25
6901	(Lee-Vic) x Fulwin: 3770-27	16	13	19	11	20
6905	Ballard: Ky. Sel. 45-34	16	11	20	9	25
6979	Fulgrain Str. 6 x Forkedeer	16	15	17	11	21
4660	Mustang	17	15	19	11	23
4600	Coy	17	14	19	11	25
2042	Lee (ck)	18	17	20	11	25
6903	(Lee-Vic) x Forkedeer	18	15	21	10	26
5107	LeConte	19	19	20	11	27
6571	(Lee-Vic) x Fulwin: 3770-7	19	17	20	11	26
6717	(Lee-Vic) x Fulwin: 3770-1	19	17	20	11	26
6904	(Lee-Vic) x Forkedeer	20	20	21	12	26

Table 59. Percent of groats and hulls of varieties and selections included in the Uniform Special Winter Oat Experiment at Feeding Hills, Mass., in 1954-55.

C.I. No.	Variety or selection	Wt. of 1000 Kernels	Pct. of Hulls	Pct. of Groats
5107	LeConte	31.2	24.3	75.7
6572	Dubois	32.0	23.5	76.5
6718	Lemont Cross	34.5	23.5	76.5
6571	(Lee-Vic) x Fulwin: 3770-7	31.2	23.0	77.0
6717	(Lee-Vic) x Fulwin: 3770-1	33.8	23.1	76.9
6901	(Lee-Vic) x Fulwin: 3070-27	32.5	23.2	76.8
4660	Mustang	34.6	22.0	78.0
4600	Coy	33.3	24.2	75.8
2042	Lee (ck)	30.3	22.3	77.7
6902	Stanton: Okla. Str.	32.9	22.7	77.3
5106	Cimarron: Woodward Comp. Sel.	32.7	21.7	78.3
3424	Wintok	30.3	21.3	78.7
5849	Early Wintok	26.7	20.7	79.3
6905	Ballard: Ky. Sel. 45-34	36.5	22.1	77.9
6903	(Lee-Vic) x Forkedeer	34.9	24.5	75.5
6904	(Lee-Vic) x Forkedeer	36.0	25.5	74.5
6979	Fulgrain Str. 6 x Forkedeer	39.0	25.8	74.2
3170	Forkedeer	35.0	24.2	75.8

Table 60. Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.^{1/}

C.I. No.	Variety or selection	Crown rust				Stem rust		Smut
		Princeton	Beltsville	Stillwater		Beltsville	Stillwater	Feeding Hills
		Ind.	Md.	Okla.		Md.	Okla.	Mass.
		%	Reac.	Reac.	Type	%	Reac.	%
5107	LeConte	30	S	MS	4 /15	S	50	0
6572	Dubois	35	CS	S	4 /10	S	40	0
6718	Lemont Cross	5	R	MS	2 /05	S	30	.5
6571	(Lee-Vic) x Fulwin: 3770-7	2	HR	Seg	0; 1/03	S	25	0
6717	(Lee-Vic) x Fulwin: 3770-1	2	HR	R	0; 2/03	S	30	0
6901	(Lee-Vic) x Fulwin: 3770-27	2	HR	R	0; 2/03	S	40	.3
4660	Mustang	2	HR	S	0; 2/03	MS	50	.2
4600	Coy	2	HR	Seg	2-4 /05	S	50	0
2042	Lee (ck)	15	I&S	S	4 /15	S	50	.4
6902	Stanton: Okla. Str.	10	R&I	Seg	2 /05	S	50	.5
5106	Cimarron: Woodward Comp. Sel.	20	S	MS	4 /30	MR	60	.1
3424	Wintok	25	S	S	4 /30	S	60	1.2
5849	Early Wintok	50	S	S	4 /20	S	70	.9
6905	Ballard: Ky. Sel. 45-34	50	CS	S	2-4 /10	MS	50	1.3
6903	(Lee-Vic) x Forkeddeer	35	I&S	MS	4 /30	S	40	0
6904	(Lee-Vic) x Forkeddeer	5	R	R	0; 2/03	S	40	0
6979	Fulgrain Str. 6 x Forkeddeer	25	I&S	S	2 4/10	S	40	0
3170	Forkeddeer	35	S	S	4 /10	S	40	1.1

^{1/}At Lexington, Ky., a trace of smut was observed in Mustang and Lee.

^{2/}Crown rust—pustule type and severity; prevalence = 100% on all varieties except CI 6718 (70%).

^{3/}Stem rust—percent severity—pustule type = 4; prevalence = 100%.

Table 61. Forage growth in the Fall and Spring on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1954-55.^{1/}

C.I. No.	Variety or selection	FALL								SPRING							
		Average 6 Stations	Beltsville Md.	Mound Valley Kansas	Lexington Ky.	Hopkinsville Ky.	New Brunswick N. J.	Feeding Hills Mass.	Average 4 Stations	Beltsville Md.	Hopkinsville Ky.	Stillwater Okla.	New Brunswick N. J.				
Percent																	
5107	LeConte	91.3	78	101	91	97	86	95	93.8	82	100	100	93	93			
6572	Dubois	99.7	107	115	91	95	90	100	97.0	95	91	104	98	98			
6718	Lemont Cross	98.8	95	106	91	105	96	100	103.0	83	136	106	87	87			
6571	{ Lee-Vic } x Fulwin: 3770-7	94.3	92	101	82	95	91	105	85.3	75	91	95	80	80			
6717	{ Lee-Vic } x Fulwin: 3770-1	93.5	78	99	86	97	96	105	84.8	76	91	94	78	78			
6901	{ Lee-Vic } x Fulwin: 3770-27	100.6	112	108	82	95	103	105	92.0	92	91	103	82	82			
4660	Mustang	98.5	110	108	91	95	92	95	102.8	98	109	101	103	103			
4600	Coy	101.2	95	111	96	100	110	95	102.3	92	109	108	100	100			
2042	Lee (ok)	100.0	100	100	100	100	100	100	100.0	100	100	100	100	100			
6902	Stanton: Okla. Str.	96.0	90	104	91	95	96	100	104.3	102	109	109	97	97			
5106	Cimarron: Woodward Comp. Sel.	104.8	95	120	96	100	113	105	108.8	98	109	115	113	113			
3424	Wintok	95.5	102	104	96	95	76	100	102.5	101	100	99	110	110			
5849	Early Wintok	94.2	90	101	91	95	88	100	98.0	93	109	103	87	87			
6905	Ballard: Ky. Sel. 45-34	95.3	93	105	91	97	86	100	97.0	94	91	101	102	102			
6903	{ Lee-Vic } x Forkedeer	98.0	97	104	91	95	96	105	101.8	98	100	101	108	108			
6904	{ Lee-Vic } x Forkedeer	94.3	80	108	91	97	90	100	97.3	83	100	108	98	98			
6979	Fulgrain Str. 6 x Forkedeer	97.2	78	110	100	100	85	110	102.3	88	109	104	108	108			
3170	Forkedeer	95.5	90	109	91	95	93	95	102.3	93	100	106	110	110			

^{1/}Percents figured on basis of Lee check = 100%.

Table 62. Type of growth on stations reporting of varieties and selections in the Uniform Special Winter Oat Experiment in 1954-55.

C.I. No.	Variety or selection	Stillwater Okla.	New Brunswick N. J.	Feeding Hills Mass. ^{1/}	SUMMARY		
					^{2/}		
5107	LeConte	D-I	D	D-I	D	I	U
6572	Dubois	D	D	I-D	3	0	0
6718	Lemont Cross	I	I	I-D	2	1	0
6571	(Lee-Vic) x Fulwin: 3770-7	D	I	I-D	0	3	0
6717	(Lee-Vic) x Fulwin: 3770-1	D	I	I-D	1	2	0
6901	(Lee-Vic) x Fulwin: 3770-27	D-I	I	I-D	1	2	0
4660	Mustang	D-I	I	D-I	2	1	0
4600	Coy	I	U	D-I	1	1	1
2042	Lee (ck)	D-I	U	I-D	1	1	1
6902	Stanton: Okla. Str.	I	I	I-D	0	3	0
5106	Cimarron: Woodward Comp. Sel.	I-U	U	I	0	2	1
3424	Wintok	D	D	D-I	3	0	0
5849	Early Wintok	D-I	D	I-D	2	1	0
6905	Ballard: Ky. Sel. 45-34	D	D	I-D	2	1	0
6903	(Lee-Vic) x Forkeddeer	D	I	I	1	2	0
6904	(Lee-Vic) x Forkeddeer	I	I	I-D	0	3	0
6979	Fulgrain Str. 6 x Forkeddeer	I-D	U	I-U	0	2	1
3170	Forkeddeer	I-D	D	D-I	2	1	0

^{1/}Data were: 1 taken to be decumbent, 2 - intermediate, and 3 - upright.

^{2/}In the summary where two types were indicated the type first appearing is the one used.

Uniform Fall Sown Oat Experiment

In 1955 this experiment was grown on stations in 11 states as follows:

Ala. - Belle Mina	Md. - Beltsville
Camden	Miss. - State College
Tallassee	Stoneville
Ark. - Fayetteville	Stoneville P.S.C.
Stuttgart	N. C. - Clayton
Fla. - Gainesville	Plymouth
Jay	Salisbury
Quincy	S. C. - Clemson
Ga. - Athens	Hartsville
Tifton	Tex. - College Station
La. - Baton Rouge	Denton
Crowley	Va. - Warsaw
St. Joseph	

In addition, seed for this nursery was sent to Aberdeen, Idaho, where it was spring-sown for observation and seed increase; to Yemassee, S. C. for observation on disease resistance; to Experiment, Ga. and Raleigh, N. C. for growing in the virus nursery; and to Quincy, Fla. for growing in the rust garden.

The nursery included 30 entries in 1955. Apple check was included twice and the local check once. In 1955 eight new entries were included in the nursery and in addition new seed of 5 repeat entries was sent to cooperators. Many of the new entries were resistant to at least some races of crown and stem rust. It was unfortunate that climatic conditions were such that performance records of these new entries in 1955 were not a reliable index of their comparative values.

Pertinent data as to the derivation and origin of the entries in this nursery appear in Table 63 whereas Table 64 includes summary data resulting from growing this nursery in 1955.

Yield, Bushels per Acre

As in previous years data on yield from the more northern and those from the more southern stations were summarized separately. Yields were reported from 11 more northern and 11 more southern points. Yield data from individual stations growing this experiment are presented in Tables 65 and 66.

Yields in 1955 were below those in some previous years. This resulted primarily because of the late spring freeze which came at a time when oats at many stations were in the shooting stage.

Average data from the more northern stations indicate that the highest yielding entries were the sister strains C.I. No's. 6571 and 6717 and next Arlington which produced average yields of 79.5, 76.4 and 75.8 bushels per acre respectively. These have usually been among the more hardy oats in this nursery. Sunland was the poorest yielder in the area, averaging only 35.1 bushels per acre. The data clearly indicate hardiness had a potent influence on yield in the area.

Data from the more southern stations indicate that in 1955 hardiness was necessary to high yield in that area also. The highest producing entries on the more southern stations were C.I. No's. 6571 and 6993 which yielded 57.4 and 52.2 bushels per acre respectively. Arlington averaged 50.8 and Victorgrain 48-93 51.7 bushels. The poorest yielding entries in the southern stations were Sunland, C.I. 6997 and Fultex which averaged only 25.4, 27.2 and 30.3 bushels respectively. Averages for most entries in the more northern area ranged between 60 and 70 bushels whereas on the more southern stations most yields ranged from 35 to 50 bushels.

Winter Hardiness

Data on winter survival were received from 7 stations. Except for the late spring freeze, oats withstood the winter in excellent fashion at nearly all points. On the average oats survived the winter very well. The highest percents of survival were recorded for Local Check and C.I. No's. 6994 and 6729. These entries survived 96.0, 95.3 and 95.1 percent respectively. The poorest survivals were recorded for Southland, Seminole, and Sunland which survived 67.7, 70.1 and 71.3 percent respectively. Arlington survived 94.8 and Victorgrain 48-93, 93.0 percent.

Test Weight

Data on test weights were received from 13 points. The spread between the highest test weight: 32.5 pounds for CI 6977 and the lowest 27.5 pounds for C.I. 6997 was 6.6 pounds per bushel. Although test weights in this test usually are relatively high that was not true in 1955 as many entries tested below 31 pounds per bushel and relatively few had average test weights above 32 pounds.

Plant Height

Although oats grew tall on some stations they were unusually short on others. On the average the tallest entry was the Arlington which on the average measured 40.2 inches tall. Many entries averaged 35 to 40 inches tall whereas the shortest entries were Fultex and C.I. 6987 which measured 31.2 and 32.4 inches tall respectively.

Standing Ability

Lodging was severe at most points reporting lodging in 1955. Data on lodging were received from 9 points but two stations reported lodging in classes rather than in percent. Consequently averages are for only 7 stations. In 1955 only three entries lodged less than 30 percent. These were C.I. No's. 6996, 6998, and 6997 which lodged 25.5, 26.6 and 29.0 percent respectively. The greatest amount of lodging was reported in Appler and in C.I. 6729. Both lodged upwards of 75 percent.

Date Headed

Data received from 11 stations indicate that on the average all oats headed in April. The earliest entry was Seminole which headed April 12 followed by Sunland and Floriland both of which headed on April 13. Delair headed April 14. The last entry to head was C.I. 6997 which headed April 27. Several entries headed April 24 or 25.

Date Ripe

Data on date ripe were received from 7 stations. The earliest entry to ripen was Victorgrain Reselection, which ripened May 24. Most of the entries ripened during the period May 25 to May 28. The last entries to ripen were C.I. No's. 6997 and 6666 which ripened May 31 and C.I. 6996 which ripened May 30.

Reaction to Disease

Data on disease resistance were received from a number of stations. Data on stem rust were received from three points. No entry was resistant at Beltsville but at Baton Rouge and College Station, C.I. No's. 6719, 6993, 6995 and 6994 were stem rust free.

Data on crown rust received from 4 stations indicated many entries were resistant on some stations but not on others. Among the most highly resistant were C.I. No's. 6997 and 6666. Some of the other entries were susceptible at all three points reporting.

Data on smut infection was received from Tifton, Ga.. Two collections of smut were used as inoculum and only two were completely free from infection although some were resistant to smut from one point but not from that from the other. Certain entries, notably C.I. No's. 6997, 6740, DeSoto, Stanton, Southland and Alamo were heavily infected by both smuts.

Data on reaction to virus were received from three points. Among the entries that appeared least affected by mosaic was Arlington whereas many entries appeared to be free from infection at one point but not at all three reporting. At Experiment, Ga., the most severely affected were entries C.I. No's. 6993 and 6995.

All entries were affected by *H. avenae* at Jay, Florida, and all by "leaf spot" at Belle Mina, Alabama. Reports on infection by leaf blight, halo blight and septoria received from Belle Mina, Ala., indicate that in general infections were not especially heavy although a reading on halo blight of 20 percent infection was recorded for C.I. 6571.

Forage Value and Type of Growth

Data on forage growth in the fall were reported from 7 points and in the spring from 14. All entries gave readings of more than 100 percent of Appler check in the fall except CI Nos. 6717, 6729, 5872 and 6666. In the spring the highest percent of growth were recorded for C.I. 6994, Floriland and Sunland. All averaged above 110 percent of check. The least growth in the spring was recorded for C.I. 6717 - 88.9 percent.

Only 4 stations reported on type of growth. A total of 5 entries were decumbent at all 4 points. These were Appler and C.I. No's. 5872, 6729, 6571 and 6717. Only 6 entries were termed "upright" at all 5 points. These were Seminole, Southland, Sunland, Alamo, Delair and C.I. 6994.

Table 63. Entries included in the Uniform Fall Sown Oat Nursery grown in 1954-55.

C.I. No.	Variety or hybrid	Selection	Source
---	Local check variety	---	---
1815	Appler	Sel. Red Rustproof	Check
3531	Fultex	Tex. Sel. 12-34-33	Tex.
3855	Stanton Strain	Lee-Victoria: Coker 40-5	S.C.
3923	DeSoto	Lee-Victoria: Ark. X-2-25-10-1	Ark.
4653	Delair	Bond x Fulghum HC 726: Tex. Resel. 4076-16	Ark.
4657	Arlington	(Lee-Victoria) x Fulwin: Md. Resel. 5288	N. C.
4660	Mustang	(Lee-Victoria) x Fulwin: Tex. Resel. 3770-9	Tex., Md.
5207	Southland	Fla. XM 4111-1-13	Fla.
5371	Alamo	(Vict. x Haj.-Banner) x (Fulg.-Vict.): Tex. 73-44-90	Tex.
5872	Nortex Strain	Stoneville Pedigreed Seed Co., Nortex Sel. 0112	Miss.
5924	Seminole	Appler x (Clinton-Santa Fe): Fla. Row 6514	Fla.
6571	Lee-Victoria x Fulwin	Tex. 3770-7	Tex.
6588	Floriland	Fla. 167 x Landhafer	Fla.
6600	Sunland	Fulghum (C.I. 708) x Landhafer: Fla. 12506	Fla.
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	Ida. Row 269	Md.
6717	(Lee-Victoria) x Fulwin	Tex. 3770-1	Ky.
6719	(Vict. x Haj.-Banner) x (Fulghum-Victoria)	Tex. 73-46-7	Tex.
6729	Nortex x Trelle Dwarf	Stoneville Pedigreed Seed Co. Sel. 41792	Miss.
6740	Wintok x (Clinton ² - Santa Fe)	Md. '52 Row 803	Md., Ida.
6977	Victorgrain Resel.	H.V. Resistant	Miss.
6986	Victorgrain 48-93	Cokers Pedigreed Seed Co.	S. C.
6987	(Arlington-Delair) x Trispermia	Cokers Pedigreed Seed Co.	S. C.
6993	Fulwin Composite Cross	Tex. Sel. 152-50-17	Tex.
6994	Tennex x (Vict. Haj.-Banner)	Tex. Sel. 119-50-8	Tex.
6995	Fulwin Composite Cross	Tex. Sel. 152-50-21	Tex.
6996	Letoria x (Clinton ² - Santa Fe)	C.I. 6602-5	Md., Ida.
6997	Atlantic x (Clinton ² - Santa Fe)	C.I. 6604-10	Md., Ida.

Table 64. Summary of data obtained on the Uniform Fall Sown Oat Experiment grown in 1954-55.

Rank in C.I. yield No.	Variety or selection	Acre yield		Ave. surv. %	Test wt. lbs.	Plant ht. ins.	Lodg- ing %	Date head Date	Date ripe Date	Forage growth ²		Type
		North (11 Sta)	South (11 Sta)							FALL (7 Sta)	SPRING (14 Sta)	
		Bu.	Bu.							%	%	
1	6571 { Lee-Victoria } x Fulwin	79.7	1	92.5	31.8	38.4	59.1	4/23	5/28	105	91.9	D
2	6717 { Lee-Victoria } x Fulwin	76.4	10	90.9	31.4	37.9	47.8	24	26	91	88.9	D
3	4657 Arlington	75.8	6	94.8	31.1	40.2	47.8	21	27	116	108.4	D-I
4	Local check	69.2	19	96.0	30.5	36.4	55.7	21	27	101	103.2	D-U
5	6994 Tennex x (Vict. x Haj.-Banner)	68.3	13	95.3	31.7	37.5	41.1	17	27	120	112.8	U
6	6993 Fulwin Composite Cross	68.1	2	89.3	30.2	39.8	60.5	18	25	117	102.8	D-U
7	6977 Victorgrain Resel.	66.8	7	95.0	32.5	35.8	47.1	17	24	114	106.8	D-I
8	3923 DeSoto	66.7	14	92.5	30.0	33.7	44.1	23	28	105	102.5	D-I
9	6986 Victorgrain 48-93	66.0	3	93.0	32.4	37.0	38.3	17	25	114	103.1	D-I
10	3855 Stanton Strain 1	65.1	18	94.5	31.2	36.0	63.2	22	26	106	96.9	D-I
11	6729 Nortex x Trelle Dwarf	64.0	8	95.1	28.1	33.5	73.4	24	26	95	97.4	D
12	5872 Nortex Strain	63.1	12	94.8	28.6	34.8	63.3	25	27	98	98.2	D
13	1815 Appler { ck }	62.6	9	90.3	28.2	35.0	57.8	24	28	100	100.2	D
14	1815 Appler { ck }	62.4	17	93.6	27.9	35.8	74.7	24	27	101	99.5	D
15	6740 Wintok x (Clinton ² - Santa Fe)	62.2	15	91.1	30.8	34.1	36.8	22	26	110	103.8	D-I
16	6995 Fulwin Composite Cross	61.3	5	86.7	32.0	38.6	67.2	19	25	117	101.0	D-I
17	6987 (Arlington-Delair) x Trispermia	60.8	11	90.8	30.6	32.4	62.8	18	28	112	106.1	I
18	4660 Mustang	59.6	4	89.7	29.8	36.0	47.8	21	28	108	101.0	D-I
19	6719 (Vict x Haj-Ban) x (Fulg-Vict)	59.5	16	79.7	31.5	34.7	34.9	23	26	106	100.6	I
20	6996 Letoria x (Clinton ² - Santa Fe)	59.2	22	90.9	28.9	37.0	25.5	24	30	106	102.2	I
21	5207 Southland	53.6	26	67.7	28.6	35.0	49.2	20	26	119	108.0	U
22	6998 New Nortex x Landhafer	50.5	25	93.7	30.8	37.5	26.6	19	26	114	103.8	I
23	6666 (H-J x C.I.4383-C.I.4189) x Land	49.6	20	77.4	28.7	34.7	46.1	25	31	99	92.3	I
24	5371 Alamo	47.2	23	80.0	31.4	32.5	35.4	17	26	114	108.8	U
25	3531 Fultex	46.1	28	87.5	30.4	31.2	49.8	19	26	107	103.2	I-U
26	4653 Delair	45.1	21	86.9	31.7	33.9	56.7	14	26	114	108.5	U
27	6588 Floriland	45.0	27	81.8	28.7	35.9	42.0	13	26	109	111.7	D-U
28	6997 Atlantic x (Clinton ² - Santa Fe)	36.9	29	87.2	27.5	37.7	29.0	27	31	117	107.1	I-U
29	5924 Seminole	36.8	24	70.1	28.4	33.6	47.7	12	26	116	103.9	U
30	6600 Sunland	35.1	30	71.3	29.0	36.7	49.2	13	26	114	111.2	U

¹/Rank in yield in the South.²/Based on Appller = 100%.³/D = Decumbent; I = Intermediate; U = Upright. Only the most frequently appearing type of growth is listed.

Table 65. Yields on stations where winters are severe of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 11 Stations	Stuttgart Ark.	Athens Ga.	Beltsville Md.	State College Miss.	Stoneville Miss.	Clayton N. C.	Plymouth N. C.	Salisbury N. C.	Clemson S. C.	Denton Tex.	Warsaw Va.
Bushels													
6571	(Lee-Victoria) x Fulwin	79.7	101.0	47.8	117.5	38.2	53.8	82.9	136.6	87.4	74.6	25.7	110.9
6717	(Lee-Victoria) x Fulwin	76.4	89.9	53.4	109.6	36.5	62.5	89.4	139.4	80.6	51.4	10.6	116.7
4657	Arlington	75.8	80.0	40.3	132.0	20.8	45.3	83.9	120.1	95.3	77.7	12.2	126.3
	Local check	69.2	65.3	49.6	84.7	28.2	36.6	74.2	108.3	100.1	44.8	28.8	140.2
6994	Tennex x (Vict. x Haj.-Banner)	68.3	63.7	57.5	109.9	21.6	51.6	51.1	114.7	67.8	71.6	20.5	120.8
6993	Fulwin Composite Cross	68.1	72.9	42.1	139.0	9.1	47.5	62.0	122.9	32.5	68.8	23.9	128.8
6977	Fulwin Composite Resel.	66.8	60.1	46.1	117.6	21.6	43.5	74.0	100.4	88.6	41.8	15.7	125.4
3923	DeSoto	66.7	78.9	31.8	125.3	9.8	42.3	77.2	105.8	69.1	58.3	13.3	121.8
6986	Victorgrain 48-93	66.0	72.9	49.9	102.3	23.7	43.9	65.0	99.3	78.0	53.3	23.5	114.6
3855	Stanton Strain 1	65.1	70.7	39.9	113.1	15.5	43.2	56.8	122.3	64.6	47.4	18.9	123.5
6729	Nortex x Trelle Dwarf	64.0	54.2	55.9	102.9	11.0	34.6	56.8	111.9	76.6	67.3	20.9	112.3
5872	Nortex Strain	63.1	55.8	53.1	109.3	19.5	44.6	58.1	95.6	66.1	52.9	25.9	113.1
1815	Appler (ok)	62.6	57.4	54.8	91.9	4.6	42.6	59.7	113.3	85.1	56.8	20.7	102.0
1815	Appler (ok)	62.4	57.7	46.9	104.7	13.1	44.4	63.8	105.1	72.1	52.0	20.7	105.4
6740	Wintok x (Clinton ² - Santa Fe)	62.2	56.4	46.4	113.2	26.7	36.3	64.1	92.5	81.5	45.5	15.7	105.4
6995	Fulwin Composite Cross	61.3	66.3	41.1	117.6	16.2	41.4	55.4	107.2	22.8	45.8	23.2	137.3
6987	(Arlington-Delair) x Trispermia	60.8	61.2	36.1	111.9	15.6	41.4	62.2	101.2	52.3	44.7	14.3	128.3
4660	Mustang	59.6	60.7	38.1	112.6	8.6	22.8	73.8	111.4	34.1	51.5	19.8	122.0
6719	(Vict x Haj.-Ban) x (Fulg-Vict)	59.5	58.5	45.4	124.5	28.9	24.7	62.3	108.7	40.6	55.0	12.3	93.9
6996	Letoria x (Clinton ² - Santa Fe)	59.2	51.1	43.6	107.5	29.9	44.1	55.6	91.2	47.5	43.2	10.7	127.2
5207	Southland	53.6	45.8	33.8	151.5	3.7	28.4	61.6	81.8	2/	34.6	9.9	79.9
6998	New Nortex x Landhafer	50.5	35.7	26.8	103.3	15.9	31.1	42.2	84.9	67.7	39.2	16.4	91.9
6666	(H-J x CI 4383- CI 4189) x Land	49.6	64.8	48.6	74.8	10.0	46.2	42.1	86.9	18.7	37.2	17.1	98.8
5371	Alamo	47.2	51.7	39.9	111.4	5.9	18.2	49.3	89.8	23.2	52.1	12.4	65.7
3531	Fultex	46.1	39.3	51.4	106.8	3.9	20.1	43.2	56.8	45.1	32.6	19.6	87.9
4653	Delair	45.1	19.5	1/	103.2	8.9	17.1	37.5	70.5	39.1	48.5	18.4	89.5
6588	Floriland	45.0	15.5	40.9	136.0	0.0	24.4	30.6	56.3	42.1	52.6	14.5	82.6
6997	Atl. x (Clinton ² - Santa Fe)	36.9	38.8	28.9	80.5	7.6	7.3	29.5	35.4	44.5	27.5	2.6	102.9
5924	Seminole	36.8	17.4	42.2	58.9	0.0	31.7	21.2	72.8	2/	-37.5	7.3	57.2
6600	Sunland	35.1	22.6	1/	90.4	6.1	21.7	29.9	49.7	11.3	27.2	8.3	75.2

1/Average of station (44.0) substituted for missing data.

2/Average of station (58.4) substituted for missing data.

Table 60. Yields on stations where winters are mild of varieties and hybrid selections included in the Uniform Fall Sown Cat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 11 stations	Ala. Belle Mina	Ala. Camden	Ala. Tallassee	Fla. Jay	Fla. Quincy	Fla. Titton	La. Baton Rouge	La. Crowley	La. St. Joseph	Hartsville S. C.	College Station Tex.
Bushels													
6571	(Lee-Victoria) x Fulwin	57.5	137.0	25.8	21.0	53.8	71.3	94.9	47.7	20.1	27.6	69.8	63.4
6993	Fulwin Composite Cross	52.2	80.0	28.6	29.8	53.6	60.3	89.3	47.6	30.0	15.0	71.0	68.6
6986	Victorgrain 48-93	51.7	111.0	10.5	26.4	46.1	68.4	87.9	61.3	11.2	16.3	77.0	53.0
4660	Mustang	51.0	105.0	6.0	10.5	49.5	62.6	90.2	65.8	22.9	9.0	73.8	65.9
4657	Arlington	50.8	102.0	13.4	36.9	38.3	75.6	77.4	56.7	17.8	16.4	62.7	61.6
6995	Fulwin Composite Cross	50.8	118.0	9.7	19.3	33.5	88.7	76.1	49.9	22.2	9.6	67.6	64.1
6977	Victorgrain Resel.	50.3	110.0	17.9	23.3	46.6	64.2	78.2	61.3	6.9	20.0	74.3	50.5
6729	Nortex x Trelle Dwarf	48.2	119.0	6.6	9.1	47.9	30.0	81.0	52.2	21.3	33.8	70.9	58.4
1815	Appler (ck)	47.0	90.0	6.6	20.4	48.0	35.2	76.2	49.9	20.1	27.3	80.7	62.9
6987	(Arlington-Delair) x Trispenia	46.8	68.0	10.0	14.2	44.3	63.5	80.8	65.6	25.5	16.1	71.4	55.4
6717	(Lee-Victoria) x Fulwin	46.8	100.0	19.0	19.0	43.2	49.7	83.1	40.6	21.2	23.5	67.7	47.8
5872	Nortex Strain	45.8	123.0	6.8	15.3	41.4	35.9	86.6	34.0	11.7	21.3	77.3	50.5
3923	DeSoto	45.3	98.0	10.2	9.4	23.4	50.1	78.6	86.2	13.6	13.8	68.4	47.0
6994	Tennex x (Vict. x Haj.-Banner)	44.1	110.0	13.3	21.8	33.7	63.3	66.1	49.9	5.3	24.1	64.8	45.8
6740	Wintok x (Clinton ² - Santa Fe)	43.7	65.0	17.3	28.7	51.2	66.2	68.8	36.3	16.5	14.7	60.0	60.2
6719	(Vict. x Haj.-Ban) x (Fulg-Vict)	42.7	118.0	9.4	24.9	27.7	48.3	67.9	29.5	9.0	19.5	69.0	57.8
1815	Appler (ck)	42.2	73.0	8.0	7.7	45.1	34.7	78.7	34.0	39.1	21.7	76.5	1/
3855	Stanton Strain 1	41.8	81.0	8.8	6.8	29.4	52.1	77.6	49.9	22.2	14.2	66.6	56.0
6666	Local check	41.7	118.0	9.4	20.1	12.1	33.0	82.6	40.6	9.6	8.2	75.6	1/
	(H-J x CI 4383- CI 4189) x Land		42.0	6.0	17.3	37.8	36.1	80.0	34.0	12.2	43.0	83.0	67.5
4653	Delair	40.9	79.0	5.1	10.2	37.8	47.8	70.5	63.6	9.0	13.5	67.1	46.6
6996	Letoria x (Clinton ² - Santa Fe)	39.3	66.0	12.5	26.7	43.7	36.3	63.2	24.9	14.2	26.2	67.3	50.8
5371	Alamo	38.7	77.0	4.6	13.6	41.2	51.4	62.7	29.5	6.4	10.2	75.0	54.0
5924	Seminole	36.1	61.0	8.3	12.8	22.9	53.1	63.6	61.3	4.2	11.4	68.1	30.2
6998	New Nortex x Landhafer	35.6	50.0	15.3	16.2	34.9	32.7	64.3	45.4	7.9	18.3	54.4	52.2
5207	Southland	31.0	35.0	4.6	6.5	21.5	56.2	57.2	38.5	8.0	6.2	76.8	30.5
6588	Floriland	30.6	54.0	4.6	10.2	9.7	35.1	71.0	34.0	4.8	15.3	57.5	40.4
3531	Fultex	30.3	55.0	2.3	6.5	20.8	23.3	53.2	52.2	13.6	9.1	66.0	30.8
6997	Atl. x (Clinton ² - Santa Fe)	27.2	26.0	7.1	7.1	28.3	42.1	59.8	22.7	8.0	22.8	50.8	24.6
6600	Sunland	25.4	37.0	5.7	7.7	14.0	28.8	61.2	24.9	10.1	8.7	46.0	35.4

1/Average of station (51.1) substituted for missing data.

Table 67. Survival of varieties included in the Uniform Fall Sown Oat Experiment in 1954-55.^{1/}

C.I. No.	Variety or selection	Average Stations 7	Belle Mina Ala.	Athens Ga.	St. Joseph La.	Beltville Md.	Salisbury N. C.	Hartsville S. C.	Warsaw Va.
						Percent			
	Local check	96.0	97	100	97.0	88.3	90	100	100
6994	Tennex x (Vict. x Haj.-Banner)	95.3	97	100	99.7	94.4	80	100	96
6729	Nortex x Trelle Dwarf	95.1	100	100	97.3	94.4	78	100	96
6977	Victorgrain Resel.	95.0	100	100	97.0	94.0	75	100	99
5872	Nortex Strain	94.8	97	100	97.7	95.0	78	100	96
4657	Arlington	94.8	97	100	96.3	94.4	78	100	98
6986	Victorgrain 48-93	93.0	100	100	96.3	90.6	70	100	94
6571	(Lee-Victoria) x Fulwin	92.5	97	100	94.7	85.6	80	100	90
3923	DeSoto	92.5	100	100	97.0	90.2	65	100	95
6740	Wintok x (Clinton ² - Santa Fe)	91.1	90	100	97.0	93.0	60	100	98
6996	Letoria x (Clinton ² - Santa Fe)	90.9	90	100	97.3	95.3	60	100	94
6717	(Lee-Victoria) x Fulwin	90.9	93	100	93.7	89.9	65	100	95
6987	(Arlington-Delair) x Trispernia	90.8	88	98	96.3	85.6	75	100	93
1815	Appler (ok)	90.3	90	100	97.0	90.4	65	100	90
4660	Mustang	89.7	100	100	97.7	86.5	45	100	99
6993	Fulwin Composite Cross	89.3	85	100	98.0	94.2	50	100	98
3531	Fultex	87.5	80	92	99.3	87.9	65	100	88
6997	Atl. x (Clinton ² - Santa Fe)	87.2	73	100	98.7	93.0	55	100	91
4653	Delair	86.9	80	95	98.0	94.6	50	100	91
6995	Fulwin Composite Cross	86.7	100	100	98.0	95.2	15	100	99
6588	Floriland	81.8	50	95	98.0	94.9	45	100	90
5371	Alamo	80.0	92	97	98.7	86.4	20	100	66
6719	(Vict. x Haj.-Ban) x (Fulg-Vict)	79.7	85	92	99.0	86.2	5	100	91
6666	(H-J x CI 4383- CI 4189) x Land	77.4	85	95	95.7	73.4	2	100	91
6600	Sumland	71.3	65	86	97.3	84.6	2	90	74
5924	Seminole	70.1	77	84	97.3	62.2	10	90	70
5207	Southland	67.7	45	64	100.0	84.1	1	100	80

^{1/}100% survival at Jay, Fla., Crowley, La., and Clemson, S. C.

Table 68. Test weights on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 13 Stations	Ark.	Guincy Fla.	Athens Ga.	Tifton Ga.	Beltzville Md.	Stoneyville Miss.	Clayton N. C.	Plymouth N. C.	Clemson S. C.	Hartsville S. C.	College Station, Texas	Denton Texas	Warsaw Va.
								Pounds							
6977	Victorgrain Resel.	32.5	31.0	32.0	33.5	35.0	34.5	33	31.7	34.1	28	32.7	38	25.5	33.0
6986	Victorgrain 48-93	32.4	31.5	31.5	33.5	35.5	34.0	33	31.7	33.9	33	32.3	37	26.0	33.2
6995	Fulwin Composite Cross	32.0	34.0	31.0	32.0	33.0	30.0	33	30.1	33.7	29	31.8	39	26.5	32.9
6571	(Lee-Victoria) x Fulwin	31.8	32.0	30.0	32.5	35.0	31.5	32	31.3	32.2	29	30.6	37	26.5	34.4
4653	Delair	31.7	28.5	31.0	1/	33.5	33.5	2/	31.8	34.0	29	34.2	38	25.0	35.5
6994	Tennex x (Vict x Haj-Banner)	31.7	33.0	31.5	30.5	30.0	31.0	33	31.5	34.8	30	30.4	35	5/	35.5
6719	(Vict x Haj-Ban) x (Fulg-Vict)	31.5	31.5	33.0	27.5	34.0	32.5	27	31.3	34.5	30	31.1	38	25.0	33.9
5371	Alamo	31.4	31.0	34.5	29.0	33.0	31.0	2/	30.5	35.0	29	32.4	36	24.5	33.9
6717	(Lee-Victoria) x Fulwin	31.4	32.0	29.5	28.5	34.0	30.5	32	32.2	32.0	30	30.6	34	29.5	33.5
3855	Stanton Strain 1	31.2	32.5	29.0	31.5	32.5	30.5	29	30.3	33.4	29	32.1	38	26.0	31.7
4657	Arlington	31.1	31.5	34.5	25.5	35.5	32.0	30	31.2	32.1	28	30.4	36	23.0	34.3
6740	Wintok x (Clinton ² -Santa Fe)	30.8	30.5	30.0	31.0	32.5	30.0	29	31.8	33.6	29	33.3	33	24.0	33.1
6998	New Nortex x Landhafer	30.8	31.5	29.5	28.0	32.5	28.5	27	32.5	32.2	29	31.1	40	26.5	32.5
6987	(Arlington-Delair) x Trispemia	30.6	27.0	32.0	31.5	34.0	29.0	26	29.4	32.9	28	32.0	38	26.0	32.1
	Local check	30.5	32.0	22.5	23.0	32.5	34.0	28	31.7	33.9	28	34.9	4/	27.0	34.2
3531	Fultex	30.4	29.0	30.0	33.0	30.5	30.5	27	30.3	34.0	27	30.4	36	24.5	33.6
6993	Fulwin Composite Cross	30.2	32.5	31.0	28.5	34.0	28.5	31	29.3	33.6	26	27.8	34	24.0	32.7
3923	DeSoto	30.0	28.5	28.0	26.5	32.5	31.0	28	31.0	32.2	30	29.8	35	24.0	34.1
4660	Mustang	29.8	31.0	29.0	26.0	32.0	29.5	25	30.1	32.5	29	29.2	38	24.0	32.5
6600	Sunland	29.0	30.5	28.0	1/	30.5	28.5	27	28.6	30.9	26	25.4	35	25.0	32.4
6996	Letoria x (Clinton ² -Santa Fe)	28.9	27.0	26.5	33.0	33.5	29.5	27	27.8	30.6	27	27.0	33	26.0	28.3
6666	(H-J x CI 4383- CI 4189) x Land	28.7	30.0	21.0	33.5	33.0	27.0	25	27.1	30.9	25	26.2	37	25.5	31.7
6588	Floxiland	28.7	28.0	28.5	1/	30.0	29.5	27	26.8	30.0	26	26.7	31	27.5	31.9
5872	Nortex Strain	28.6	27.5	24.0	31.5	32.0	28.0	27	26.7	31.3	26	27.0	34	28.0	28.9
5207	Southland	28.6	27.5	32.0	24.0	31.5	27.0	26	29.2	32.7	26	31.1	31	22.0	32.3
5924	Seminole	28.4	26.0	30.0	27.0	30.5	25.5	28	27.5	31.5	27	30.3	31	22.5	32.6
1815	Appler (ok)	28.2	29.5	22.0	31.0	31.0	26.5	27	26.1	29.9	24	27.6	36	26.5	30.0
6729	Nortex x Trelle Dwarf	28.1	28.5	23.0	25.5	32.0	26.5	26	27.0	31.0	24	26.7	35	28.0	31.6
1815	Appler (ok)	27.9	28.5	22.0	31.0	30.5	26.0	27	26.6	29.8	26	25.5	4/	5/	28.9
6997	Atl. x (Clinton ² -Santa Fe)	27.5	27.5	25.0	30.5	32.5	25.0	2/	27.5	29.4	25	24.9	28	5/	27.7

1/Average of station (29.6) substituted for missing data.

2/Average of station (28.5) substituted for missing data.

3/Average of station (27.6) substituted for missing data.

4/Average of station (35.4) substituted for missing data.

5/Average of station (25.5) substituted for missing data.

Table 69. Plant heights on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 11 Stations	Belle Mina Ala.	Tallassee Ala.	Stuttgart Ark.	Athens Ga.	Tifton Ga.	Baton Rouge La.	St. Joseph La.	Beltsville Md.	College Sta- tion, Texas	Denton Texas	Warsaw Va.
								Inches					
3531	Fultex	31.2	29	37	30	20	33	40	32	36.5	34	18	34
6987	(Arlington-Delair) x Trispermia	32.4	28	36	32	22	33	46	37	34.5	34	18	36
5371	Alamo	32.5	29	39	29	19	33	44	45	38.5	29	17	35
6729	Nortex x Trelle Dwarf	33.5	32	38	35	25	36	40	30	39.0	35	19	39
5924	Seminole	33.6	30	41	27	24	32	44	43	42.0	30	17	40
3923	DeSoto	33.7	32	41	32	26	36	42	35	39.5	33	17	37
4653	Delair	33.9	28	39	29	21	36	46	36	43.0	34	20	41
6740	Wintok x (Clinton ² - Santa Fe)	34.1	30	39	32	21	36	44	38	41.0	34	18	42
6666	(H-J x CI 4383- CI 4189) x Land	34.7	30	39	31	25	38	42	37	41.0	38	18	43
6719	(Vict x Haj-Ban) x (Fulg-Vict)	34.7	33	42	33	20	35	46	42	42.0	36	16	37
5872	Nortex Strain	34.8	33	38	33	25	36	46	35	41.0	36	19	41
1815	Appler (ck)	35.0	31	49	32	23	36	46	34	42.5	31	18	43
5207	Southland	35.0	34	42	29	23	34	48	43	40.0	35	19	38
6977	Victorgrain Resel.	35.8	34	43	31	23	36	48	42	42.5	37	19	38
1815	Appler (ck)	35.8	32	39	33	23	36	48	42	42.5	1/1	2/2	44
6588	Floriland	35.9	34	42	27	23	35	46	41	48.0	36	19	44
4660	Mustang	36.0	32	41	34	24	39	50	43	40.5	35	18	40
3855	Stanton Strain 1	36.0	33	39	33	24	41	48	40	43.0	36	18	41
	Local check	36.4	33	39	35	23	37	48	45	44.0	1/1	20	41
6600	Sunland	36.7	33	42	32	24	34	48	44	47.0	36	20	44
6996	Letoria x (Clinton ² - Santa Fe)	37.0	34	46	35	25	39	46	42	45.0	38	17	40
6986	Victorgrain 48-93	37.0	34	43	37	25	39	48	43	42.5	37	19	39
6998	New Nortex x Landhafer	37.5	31	44	34	23	43	48	42	45.0	40	19	44
6994	Tennex x (Vict. x Haj-Banner)	37.5	35	45	34	23	38	54	44	44.0	36	2/2	41
6997	Atl. x (Clinton ² - Santa Fe)	37.7	39	43	34	31	42	48	42	42.0	34	18	42
6717	(Lee-Victoria) x Fulwin	37.9	33	41	37	27	40	48	53	41.0	39	17	41
6571	(Lee-Victoria) x Fulwin	38.4	33	45	35	26	43	48	54	41.0	39	19	39
6995	Fulwin Composite Cross	38.6	34	45	35	24	42	54	46	45.0	37	20	43
6993	Fulwin Composite Cross	39.8	34	46	41	24	43	52	48	43.0	44	22	41
4657	Arlington	40.2	36	47	36	29	46	54	46	44.5	42	18	44

1/Average of station (35.9) substituted for missing data.

2/Average of station (18.5) substituted for missing data.

Table 70. Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average Stations	Belle Mina Ala.	Tallassee Ala.	Stuttgart Ark.	Baton Rouge La.	St. Joseph La.	Beltsville Md.	Warsaw Va.	Clayton N. C.	Plymouth N. C.
							Percent				
6996	Latoria x (Clinton ² - Santa Fe)	25.5	2	63	0	1	5.6	78	29	1.8	1.8
6998	New Nortex x Landhafer	26.6	10	48	0	20	18.3	73	17	1.0	1.0
6997	Atl. x (Clinton ² - Santa Fe)	29.0	7	62	0	1	28.3	60	45	1.0	1.5
6719	(Vict x Haj-Ban) x (Fulg-Vict)	34.9	12	68	5	20	31.3	53	55	1.0	1.5
5371	Alamo	35.4	10	63	5	40	30.0	57	43	1.0	1.5
6740	Wintok x (Clinton ² - Santa Fe)	36.8	10	78	8	1	36.6	78	46	1.8	2.5
6986	Victorgrain 48-93	38.3	5	53	2	60	39.0	50	59	1.8	2.8
6994	Tennex x (Vict. x Haj.-Banner)	41.1	3	98	2	1	36.0	95	53	2.5	2.3
6588	Floriland	42.0	5	78	0	40	61.7	73	36	2.0	1.8
3923	DeSoto	44.1	13	97	2	20	49.7	95	32	1.0	2.5
6666	(H-J x CI 4383- CI 4189) x Land.	46.1	30	95	10	1	41.7	87	58	1.5	1.8
6977	Victorgrain Resel.	47.1	2	82	20	60	50.0	50	66	1.5	2.3
5924	Seminole	47.7	15	83	0	40	68.0	73	55	2.0	2.3
6717	(Lee-Victoria) x Fulwin	47.8	33	96	8	20	43.3	85	49	1.5	2.3
4660	Mustang	47.8	40	94	0	1	51.7	87	61	1.8	2.0
4657	Arlington	47.8	22	98	0	1	48.3	95	70	1.5	2.8
5207	Southland	49.2	13	97	2	60	56.7	73	43	1.3	2.3
6600	Sunland	49.2	7	88	0	60	58.3	72	59	2.0	2.5
3531	Fultex	49.8	7	96	0	60	46.7	80	59	1.5	1.0
	Local check	55.7	7	78	2	80	96.7	72	54	1.0	3.3
4653	Delair	56.7	40	87	5	80	76.7	60	48	1.8	2.3
1815	Appler (ok)	57.8	37	98	30	1	77.3	95	66	3.0	2.8
6571	(Lee-Victoria) x Fulwin	59.1	38	96	15	20	96.0	95	54	1.8	2.0
6993	Fulwin Composite Cross	60.5	25	93	5	40	97.7	95	68	2.0	2.3
6987	(Arlington-Delair) x Trispermia	62.8	15	96	7	60	98.3	93	70	1.5	2.8
3855	Stanton Strain 1	63.2	53	99	25	40	65.3	90	70	2.0	2.8
5872	Nortex Strain	63.3	80	98	8	40	47.0	95	75	1.8	2.3
6995	Fulwin Composite Cross	67.2	36	96	90	40	47.7	95	66	3.0	3.0
6729	Nortex x Trelle Dwarf	73.4	90	98	10	60	75.0	95	86	2.5	2.0
1815	Appler (ok)	74.7	88	99	15	40	96.7	93	91	3.5	3.3

1/Reported by classes: 1 = upright; 4 = badly lodged, hence not included in averages.

Table 71. Dates of heading on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 11 Stations	Stuttgart Ark. 1/	Jay Fla.	Quincy Fla.	Tifton Ga.	Beltsville Md.	Clayton N. C.	Clemson S. C.	Hartsville S. C.	College Sta-tion, Texas	Denton Texas	Warsaw Va.
5924	Seminole	4/12	5/8	3/23	3/18	3/20	5/20	4/18	4/29	4/21	2/8	4/20	5/2
6588	Floriland	13	7	23	22	19	15	15	28	18	3/12	18	4/28
6600	Sumland	13	7	23	18	17	20	16	28	18	10	21	28
4653	Delair	14	4	4/4	21	19	16	18	26	17	14	19	27
5371	Alamo	17	4/30	3	23	23	17	21	29	21	22	21	5/1
6986	Victorgrain 48-93	17	30	11	4/2	26	16	20	27	23	12	19	4/29
6977	Victorgrain Resel.	17	30	8	1	26	16	19	26	23	20	19	29
6994	Tennex x (Viot. x Haj-Banner)	17	30	4	3/26	26	18	18	28	30	17	4/	29
6987	(Arlington-Delair) x Trispermia	18	5/1	4	23	25	22	22	5/1	26	19	22	5/2
6993	Fulwin Composite Cross	18	4/28	4	4/3	4/6	20	20	4/28	21	16	18	1
6998	New Nortex x Landhafer	19	5/2	11	1	8	17	18	30	19	16	21	4/30
3531	Fultex	19	2	11	6	3/29	21	22	29	21	15	20	5/1
6995	Fulwin Composite Cross	19	4/28	4	5	4/8	23	20	29	26	14	18	4
5207	Southland	20	5/6	6	3	3/26	24	25	5/2	26	20	19	4
	Local check	21	1	3/23	14	4/14	24	24	4/26	21	3/	21	7
4660	Mustang	21	6	4/6	3	10	23	22	29	21	19	21	5
4657	Arlington	21	4/29	11	6	11	22	21	5/1	26	18	22	2
6740	Wintok x (Clinton ² - Santa Fe)	22	5/2	11	6	9	23	23	2	26	17	20	9
3855	Stanton Strain 1	22	4/28	11	14	12	21	22	4/30	25	23	20	4
6719	(Vict x Haj-Ban) x (Fulg-Vict)	23	5/4	12	8	6	24	23	5/3	28	24	22	7
6571	(Lee-Victoria) x Fulwin	23	4/26	12	10	4	27	23	1	26	29	20	7
3923	DeSoto	23	5/2	11	5	12	23	22	2	5/1	21	21	7
6996	Letoria x (Clinton ² - Santa Fe)	24	6	15	10	8	23	24	5	4/29	23	23	7
1815	Appler (ck)	24	7	20	14	14	21	21	4/30	26	17	19	6
5872	Nortex Strain	24	7	20	14	14	21	24	29	26	16	19	5
6729	Nortex x Trelle Dwarf	24	6	20	14	14	21	22	5/3	26	16	18	5
6717	(Lee-Victoria) x Fulwin	24	4/26	15	14	5	25	27	1	28	30	21	8
1815	Appler (ck)	24	5/5	20	14	14	23	21	1	26	3/	4/	5
6666	(H-J x CI 4383- CI 4189) x Land.	25	4/30	17	18	15	24	24	4	28	23	21	6
6997	Atl. x (Clinton ² - Santa Fe)	27	5/8	15	12	5	27	5/1	6	5/4	4/2	26	10

1/Date 10% headed.

3/Average of station (3/18) substituted for missing data.

2/Date 1/3 headed.

4/Average of station (4/21) substituted for missing data.

Table 72. Dates of ripening on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Date											College Sta- tion, Texas	Denton Texas
		Average 7 Stations	Belle Mina Ala.	Tallassee Ala.	Athens Ga.	Baton Rouge La.	Beltzville Md.	Date						
6977	Victorgrain Resel.	5/24	6/9	5/31	6/6	5/5	6/17	4/22	5/15					5/15
6986	Victorgrain 48-93	25	8	31	6	5	15	29	15					15
6993	Fulwin Composite Cross	25	9	31	4	8	19	22	15					15
6995	Fulwin Composite Cross	25	8	31	3	8	20	28	14					14
6740	Wintok x (Clinton ² - Santa Fe)	26	11	31	10	8	16	27	15					15
6729	Nortex x Trelle Dwarf	26	7	31	9	8	19	26	17					17
6998	New Nortex x Landhafer	26	11	31	8	6	17	26	15					15
5924	Seminole	26	11	31	8	4/28	20	27	18					18
6588	Floriland	26	12	31	10	28	17	29	16					16
5207	Southland	26	17	31	10	5/3	17	24	17					17
6600	Sunland	26	10	31	1/	3	19	26	15					15
5371	Alamo	26	11	31	4	5	15	5/4	17					17
6719	(Vict x Haj-Ban) x (Fulg-Vict)	26	12	31	9	7	19	4/18	19					19
4653	Delair	26	8	31	1/	3	15	2/	18					18
3531	Fultex	26	10	31	6	5	21	25	15					15
6717	(Lee-Victoria) x Fulwin	26	10	31	6	5	20	26	19					19
3855	Stanton Strain 1	26	11	31	9	6	19	26	15					15
5872	Nortex Strain	27	10	31	9	10	17	26	18					18
	Local check	27	8	31	9	14	15	27	18					18
4657	Arlington	27	10	31	9	4	19	2/	18					18
1815	Appler (ok)	27	10	31	8	8	17	29	3/					3/
6994	Tennex x (Vict. x Haj.-Banner)	27	9	31	7	8	19	2/	3/					3/
1815	Appler (ok)	28	9	31	8	10	20	5/4	15					15
6987	(Arlington-Delair) x Trispermia	28	10	31	8	5	20	5	18					18
	(Lee-Victoria) x Fulwin	28	10	31	6	5	20	6	19					19
4660	Mustang	28	10	31	8	7	20	6	18					18
3923	DeSoto	28	11	31	14	3	19	4	15					15
6996	Letoria x (Clinton ² - Santa Fe)	30	10	31	14	12	20	6	18					18
6997	Atl. x (Clinton ² - Santa Fe)	31	20	6/2	14	12	19	6	20					20
6666	(H-J x CI 4383- CI 4189) x Land.	31	19	5/31	14	12	20	6	18					18

¹/Average of station (6/9) substituted for missing data.

²/Average of station (4/29) substituted for missing data.

³/Average of station (5/17) substituted for missing data.

Table 73. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Crown rust				Stem rust				Smut				H. avenae 7/	Mosaic & Red leaf		Mosaic		Leaf spot		Leaf blight	Halo blight	Septoria
		Reac %	% Reac	1/	2/	3/	% Reac	% Reac	% Reac	4/	5/	6/	7/		%	%	Type	%	Type	%			
6996	Latoria x (Clinton2 - Santa Fe)	HR	10	HR	R	R	0	HR	S	35	54	43	P	2	20	5-S	3	5	1.8	0			
6997	Atl. x (Clinton2 - Santa Fe)	HR	0	HR	R	R	0	HR	S	15	81	84	P	2	20	10-S	2	15	1.4	0			
6740	Wintok x (Clinton2 - Santa Fe)	S	20	HR	R	R	0	HR	S	20	76	70	P	1	T	5-S	1	2	2.4	0			
6666	(H-J x CI 4383-CI 4189)x Land	HR	0	HR	R	R	0	HR	S	0	0	63		1	20	5-S	4	20	3.8	0			
1815	Appler (ck)	CS	10	S	MR	T	0	S	S	10	11	61		2	15	0	0	5	0.0	5			
5872	Nortex Strain	CS	15	S	Seg	25	40	S	S	10	0	73		1	T	5-L	0	2	0.0	0			
6729	Nortex x Trelle Dwarf	CS	10	S	Seg	25	40	S	S	25	17	45		1	T	5-L	0	2	0.0	0			
6998	New Nortex x Landhafer	HR	30	R	R	R	0	CS	S	30	7	69		1	T	5-L	1	2	0.0	0			
5924	Seminole	HR	10	R	Dead	E	80	CS	Dead	15	0	0		4	20	0	1	0	0.0	0			
6588	Floriland	HR	30	R	R	R	0	CS	S	20	24	82		3	T	5-L	0	5	0.0	0			
5207	Southland	CS	40	R	Dead	0	CS	CS	Dead	25	87	76		3	T	5-L	0	20	1.0	0			
6600	Sunland	IS	20	R	Dead	E	80	CS	Dead	35	11	79	P	3	T	5-L	0	20	2.0	0			
5371	Alamo	CS	20	HR	R	R	0	HR	S	0	82	71		2	5	20-S	0	20	1.5	0			
6719	(Vict x Haj-Ban) x (Fulg-Vict)	HR	20	HR	R	R	0	HR	S	0	80	73		2	T	50-VS	3	2	0.4	0			
4653	Delair	CS	40	CS	Seg	0	80	CS	S	10	8	6		2	T	5-S	0	2	0.0	0			
	Local check	CS	10	I	Seg	30	50	I	S	0	10	69		3	5	5-S	0	5	0.0	0			
6986	Victorgrain 48-93	CS	30	-	R	R	0	CS	S	20	10	63		2	T	10-S	0	3	1.2	0			
6977	Victorgrain Resel.	CS	40	CS	R	R	35	80	CS	S	7	78		2	15	10-S	0	20	1.4	0			
3531	Fultex	CS	10	R	R	R	0	75	CS	S	95	79	P	3	T	10-S	1	2	0.8	0			
6997	(Arl.-Delair) x Trispermia	R	5	R	R	R	0	75	CS	S	0	0		2	15	40-VS	1	15	1.4	0			
6571	(Lee-Victoria) x Fulwin	I/S	20	R	R	R	0	60	S	15	11	6		2	20	20-S	1	20	1.0	0			
6717	(Lee-Victoria) x Fulwin	CS	40	I	R	R	0	50	S	20	12	4		2	5	5-S	1	15	0.4	0			
4660	Mustang	CS	30	R	R	R	0	60	CS	S	15	31	0	3	15	20-VS	2	20	2.0	0			
3923	DeSoto	CS	15	25	HR	R	0	70	CS	S	15	100	89	2	20	5-S	1	20	0.4	0			
4657	Arlington	CS	15	25	HR	Seg	0	70	CS	S	35	22		3	5	0	0	5	2.6	0			
1815	Appler (ck)	CS	5	I	R	R	-	70	CS	S	11	61		2	15	10-S	0	5	0.0	5			
3855	Stanton Strain 1	CS	25	R	S	S	0	80	CS	S	100	81	P	3	5	50-S	3	5	0.2	0			
6993	Fulwin Composite Cross	CS	50	80	S	S	0	HR	S	0	62	48	P	2	2	80-VS	3	2	1.8	0			
6995	Fulwin Composite Cross	CS	25	60	I	MR	0	0	HR	S	100	83		3	3	80-VS	4	2	1.2	0			
6994	Tennex x (Vict. x Haj-Banner)	CS	25	70	R	S	0	0	HR	S	100	71		4	5	5-S	1	3	0.0	0			

1/Headings from nursery inoculated with crown rust races 203 and 258.

2/E = Early and infection not read.

3/Headings from nursery inoculated with races 7A and 8.

4/Inoculum from Tifton.

5/Inoculum from Coker's Pedigreed Seed Co.

6/P = Smut observed.

7/Type 0 = none observed; 4 = highly infected.

8/S = susceptible; VS = very susceptible; L = light.

Table 74. Estimates of forage growth in the Fall on stations reporting of varieties and hybrid selections included in the Fall Sown Oat Experiment grown in 1954-55.

(Percentages on forage growth based on Applr (check) equalling 100%)

C.I. No.	Variety or selection	Average stations	Stuttgart Ark.	Quincy Ile.	Clinton Ga.	Baton Rouge La.	St. Joseph Mo.	Beltsville Md.	College Sta- tion, Texas
						Percent			
6994	Tennex x (Vict. x Haj-Banner)	120	110	123	173	105	113	100	115
5207	Southland	119	122	124	139	108	116	107	115
6997	Atl. x (Clinton ² - Santa Fe)	117	120	119	153	104	106	105	110
6993	Fulwin Composite Cross	117	115	121	168	96	107	104	105
6995	Fulwin Composite Cross	117	105	114	193	96	107	103	100
5924	Seminole	116	130	126	140	105	108	95	110
4657	Arlington	116	105	114	187	106	101	97	100
6998	New Nortex x Landhafer	114	110	113	178	100	105	88	105
6600	Swaland	114	105	124	152	105	109	92	110
5371	Alamo	114	110	120	145	110	114	90	110
4653	Delair	114	115	120	156	105	107	92	105
6986	Victorgrain 48-93	114	105	113	170	101	101	95	110
6977	Victorgrain Resel.	114	100	113	183	103	102	90	105
6987	(Arlington-Delair) x Trispermia	112	95	119	182	100	102	81	105
6740	Wintok x (Clinton ² - Santa Fe)	110	110	114	135	103	106	96	105
6588	Floriland	109	110	118	130	106	105	93	100
4660	Mustang	108	90	110	183	98	101	80	95
3531	Fultex	107	110	108	128	104	109	93	95
6996	Letoria x (Clinton ² - Santa Fe)	106	105	111	138	101	103	95	90
6719	(Vict x Haj-Ban) x (Fulg-Vict)	106	115	110	114	103	105	92	105
3855	Stanton Strain 1	106	100	105	152	90	102	100	95
6571	(Lee-Victoria) x Fulwin	105	90	106	157	94	99	95	95
3923	DeSoto	105	100	109	140	100	105	86	95
1815	Local check	101	105	100	106	104	103	84	100
	Appler (ck)	100	100	100	100	100	100	100	100
1815	Appler (ck)	100	100	100	100	100	100	100	100
6666	(H-J x CI 4383- CI 4189) x Land.	99	110	109	98	101	100	77	100
5872	Nortex Strain	98	100	100	85	100	100	101	100
6729	Nortex x Treille Dwarf	95	100	99	80	90	99	98	100
6717	(Lee-Victoria) x Fulwin	91	85	101	89	92	99	83	90

1/Average of station (103) substituted for missing data.

Table 75. Estimates of forage growth in the Spring on stations reporting of varieties and hybrid selections included in the Fall Sown Oat Experiment grown in 1954-55.

(Percentages on forage growth based on Appler (check) equalling 100%)

C.I. No.	Variety or selection	Average 14 Stations	Ark.	Day	Fla.	Quincy	Athens	Experiment	Tifton	Ga.	Baton Rouge	Beltsville	Miss.	Clayton	Hartsville	College Station, Texas	Warsaw	Yemassee
6994	Tennex x (Vict. x Haj.-Banner)	112.8	115	123	125	113	115	104	108	98	111	107.5	120	110	114	115		
6588	Floriland	111.7	115	128	123	110	110	112	105	110	102	102.5	115	95	111	125		
6600	Sunland	111.2	110	130	136	102	115	112	104	85	90	112.5	115	110	115	120		
5371	Alamo	108.8	105	136	121	101	110	104	108	92	110	107.5	120	105	101	115		
4653	Delair	108.5	105	115	129	106	105	108	95	92	110	107.5	120	100	111	120		
4657	Arlington	108.4	110	118	121	105	110	106	110	107	98	107.5	110	90	110	115		
5207	Southland	108.0	115	133	123	110	120	110	103	67	72	112.5	120	105	115	115		
6997	Atl. x (Clinton ² - Santa Fe)	107.1	117	123	120	100	110	120	105	90	101	105.0	115	90	104	100		
6977	Victorgrain Resel.	106.8	110	113	121	105	110	108	103	90	107	117.5	100	105	105	100		
6987	(Arlington-Delair) x Trispernia	106.1	106	121	123	101	110	110	98	70	107	105.0	115	100	110	110		
5924	Seminole	103.9	125	133	135	100	115	106	108	32	54	102.5	115	105	104	120		
6740	Wintok x (Clinton ² - Santa Fe)	103.8	107	106	118	105	100	104	104	93	105	100.0	105	90	106	110		
6998	New Nortex x Landhafer	103.8	110	101	115	106	90	108	98	98	100	97.5	115	90	115	110		
	Local check	103.2	112	121	100	100	100	100	105	80	103	100.0	110	2/	111	110		
3531	Fultex	103.2	110	120	113	96	110	102	106	88	99	100.0	105	95	101	100		
6986	Victorgrain 48-93	103.1	106	113	121	106	105	108	100	83	100	102.5	100	90	104	105		
6993	Fulwin Composite Cross	102.8	102	123	120	112	105	102	98	103	93	100.0	110	100	111	60		
3923	DeSoto	102.5	102	111	119	105	105	102	103	98	102	100.0	110	70	108	100		
6996	Latoria x (Clinton ² - Santa Fe)	102.2	109	115	111	100	100	110	103	98	104	100.0	110	80	111	80		
4660	Mustang	101.0	100	111	120	103	100	104	100	100	101	100.0	105	90	105	75		
6995	Fulwin Composite Cross	101.0	115	121	115	103	100	102	98	103	89	117.5	105	95	110	40		
6719	(Vict. x Haj-Ban) x (Fulg-Vict)	100.6	115	113	109	80	105	102	105	90	93	105.0	100	105	106	80		
1815	Appler (ck)	100.0	100	100	100	100	100	100	100	100	100	100.0	100	100	100	100		
1815	Appler (ck)	100.0	100	100	100	100	100	100	100	100	100	100.0	100	100	100	100		
5872	Nortex Strain	98.2	105	91	100	100	90	100	101	105	96	100.0	100	90	97	100		
6729	Nortex x Trelle Dwarf	97.4	105	91	98	100	90	100	95	98	104	92.5	100	90	100	100		
3855	Stanton Strain 1	96.9	100	106	111	96	105	100	95	107	95	95.0	110	80	106	50		
6666	(H-J x CI 4383- CI 4189) x Land	92.3	105	110	104	100	95	100	104	65	100	95.0	110	75	104	25		
6571	(Lee-Victoria) x Fulwin	91.9	88	108	109	98	105	98	96	97	82	90.0	90	70	86	70		
6717	(Lee-Victoria) x Fulwin	88.9	80	96	104	93	95	92	98	88	71	92.5	100	70	90	75		

1/Average of station (101.6) substituted for missing data.

2/Average of station (92.7) substituted for missing data.

Table 76. Type of plant growth on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 4 Stations	Stuttgart Ark.	Quincy Fla.	Stoneville Miss.	Hartsville S. C.	SUMMARY		
							1/		
							D	I	U
6996	Lectoria x (Clinton ² - Santa Fe)	I	I-U	I	I	I	0	4	0
6997	Atl. x (Clinton ² - Santa Fe)	I-U	I-U	U	U	U	0	1	3
6740	Wintok x (Clinton ² - Santa Fe)	D-I	I	I-U	I	D	1	3	0
6666	(H-J x CI 4383- CI 4189) x Land	I	I-D	I	I	U	0	3	1
1815	Appler (ok)	D	D	D	D	D	4	0	0
5872	Nortex Strain	D	D	D	D	D	4	0	0
6729	Nortex x Trelle Dwarf	D	D	D	D	D	4	0	0
6998	New Nortex x Landhafer	I	I	I	I	I	0	4	0
5924	Seminole	U	U	U	U	U	0	0	4
6588	Floriland	D-U	D	I-U	I	U	1	2	1
5207	Southland	U	U	U	U	U	0	0	4
6600	Sunland	U	U	U	U	U	0	0	4
5371	Alamo	U	U	U	U	U	0	0	4
6719	(Vict. x Haj-Ban) x (Fulg-Vict)	I	I	I-U	I	I	0	4	0
4653	Delair	U	U	U	U	U	0	0	4
	Local check	D-U	U	D	D	I	2	1	1
6986	Victorgrain 48-93	D-I	I	I	I	D	1	3	0
6977	Victorgrain Resel.	D-I	I-D	I	I	D	1	3	0
3531	Fultex	I-U	U	I-U	U	I	0	2	2
6987	(Arlington-Delair) x Trispermia	I	I-D	I-U	I	I	0	4	0
6571	(Lee-Victoria) x Fulwin	D	D	D	D	D	4	0	0
6717	(Lee-Victoria) x Fulwin	D	D	D	D	D	4	0	0
4660	Mustang	D-I	I	I	D	D	2	2	0
3923	DeSoto	D-I	I-U	I	I	D	1	3	0
4657	Arlington	D-I	I	I	I	D	1	3	0
1815	Appler (ok)	D	D	D	D	D	4	0	0
3855	Stanton Strain 1	D-I	I-D	I-D	D	D	2	2	0
6993	Fulwin Composite Cross	D-U	I-D	U	I	D	1	2	1
6995	Fulwin Composite Cross	D-I	I-U	I-U	D	D	2	2	0
6994	Tennex x (Vict. x Haj.-Banner)	U	U	U	U	U	0	0	4

1/U = Upright; I = Intermediate; D = Decumbent.

Uniform Florida-Gulf Coast Experiment

Table 77 presents pertinent data on the entries in this experiment and Table 78 includes summary data on the regional Florida-Gulf Coast Experiment grown in 1954-55. Data from individual stations are included in Tables 79 to 88 inclusive. Although seed for sowing the experiment was sent to several additional stations in the fall of 1954 yield data were reported from only 13 points. As only one replicate was seeded on each of two stations yield averages are for only 11 stations. Stations receiving seed for sowing this nursery included:

Ala. - Camden	Ga. - Tifton
Fairhope	La. - Baton Rouge
Headland	Crowley
Tallassee	Miss. - McNeil
Ariz. - Mesa	Stoneville
Fla. - Gainesville	S. C. - Hartsville
Jay	Tex. - College Station
Quincy	

Seed of the entries in this nursery was sent to Beltsville, Md. and Aberdeen, Idaho, for observation and seed increase purposes and to Yemassee, S. C., Quincy, Fla., Experiment, Ga., and Raleigh, N. C., to observe disease reaction.

A total of 24 entries were included in 1955. Many of these were grown for the first time. There has been a larger number of selections eliminated from year to year in this than in any other regional fall sown nursery. The conditions for oats in this area are such that few entries prove especially well adapted. Rust and other diseases are more severe as a rule in the Deep South and rust susceptible entries are often destroyed. With a few exceptions all entries in the nursery in 1955 are crown and stem rust resistant although some are not resistant to the races of stem rust most prevalent in the United States today. Early oats are usually most productive in this area but earliness is not the primary requisite. It is crown rust resistance. The check varieties were the same as those grown in 1954.

Yield, Bushels per Acre

On the average yields of the entries in this nursery were very good for the area. This is of special interest in view of the amount of winter killing that was observed. The highest yielding entries were Victorgrain 48-93, Appler and Alamo which averaged 59.5, 56.3 and 53.2 bushels per acre respectively. Sunland was the poorest yielding entry. It averaged only 37.6 bushels.

Winter Hardiness

A primary reason for poor yields of tender oats in 1954-55 was the cold spell that swept through the south in late March. The earlier oats were at that time in an advanced stage of development and thus very susceptible to cold injury. None of the oats recently released in the Florida-south Georgia area have any considerable degree of hardiness and all yielded below average in 1954-55. Doubtless this was largely due to the fact that they were so badly hurt by the late freeze.

Test Weight

As in previous years wide differences in test weights were reported. The best test weights -- 34.1, 33.6, 33.5, 33.5, and 33.3 pounds per bushel were recorded for Alamo, C.I. 6987, Victorgrain 48-93, C.I. 6985, and C.I. 6757 respectively. Appler tested 30.0 pounds per bushel. The poorest test weights 28.8, 29.4 and 29.7 pounds per bushel were recorded for C.I. No's. 7023, 7015 and 7016 respectively.

Plant Height

Oats in this experiment averaged rather tall. The tallest entry was C.I. 6985 which measured on the average 47.6 inches, whereas the shortest was Alamo which averaged only 37.2 inches tall. The difference is 10 inches in height. Some three-fourths of the 24 entries grown averaged more than 40 inches tall.

Standing Ability

Lodging reported from 4 stations indicate the stiffest strawed entries were C.I. No's. 7016 and 7019. Both averaged only 11 percent lodged. The weakest strawed oats appeared to be Sunland, Floriland, Southland, Appler and C.I. No's. 6987, 6757, 7017 and 7013. All lodged more than 50 percent and Sunland had an average percentage of 60.8.

Date Headed

Average data indicated that among the 24 entries 6 headed in March and the rest in April. The earliest entries were Seminole and Sunland which headed March 23 and March 26 respectively. The last entries to head were C.I. No's. 6985 and 7016 which headed April 16. Appler headed April 14 and Southland April 5.

Date Ripe

In general date of ripening was related to date of heading rather closely. Nearly all oats ripened during the latter half of May. Only a few exceptions were noted. Seminole, Southland and Floriland were among the earliest entries to ripen whereas C.I. 6978 was the last to ripen.

Reaction to Disease

Data on reaction to crown rust were received from 3 points and to stem rust from 2 points. Rusts were not severe in the South in 1955 and numerous entries were read resistant to crown rust at all 3 points and to stem rust at both points reporting.

Data on smut resistance were received from 3 points. At Headland, Ala., and Baton Rouge, La., infections were from natural sources and light infections were recorded on a few entries. A special smut nursery was grown at Tifton, Ga.. Two inoculum mixtures were used; one from Tifton-grown oats and one from the Coker's Pedigreed Seed Co. Most entries were infected rather severely but 4 showed no infection by either inoculum. These were C.I. No's. 6987, 7011 and 6978 and Seminole. Some of the entries were much more severely infected by one than by the other smut inoculum used.

Three stations reported on the reaction of the entries to *H. avenae*. No entry was free from infection at all three points but infections were lightest in C.I. No's. 7019 6744, 6985 and 6978. Observations on infections by mosaic were received from two points. Considerable variation among different entries was observed. The least affected were C.I. No's. 6978, 6985, 6987, 7019 and Seminole.

Data on leaf blight, halo blight, septoria and blast were received from Headland, Ala., where many entries were not affected by any of the first three of these diseases. No blast was present or if present it was light in most entries. Entries most affected by blast however were C.I. No's. 6985, 6922 and Alamo. Each had readings of 20 percent.

Forage Value and Type of Growth

Forage reports were received from three stations in the fall and seven in the spring. Both fall and spring forage estimates exceeded check (Appler) in every case. This indicates clearly advances made in efforts to produce pasture type oats in this area. The highest percents of forage in the fall were recorded for C.I. No's. 7018 and 7014. The average percents for these entries were 143.0 and 141.3 percent respectively. The highest spring estimates were 119.9, 119.0, 118.9 and 118.0 for Sunland, Seminole, Alamo and C.I. 7013 respectively. The highest seasonal average forage rating was produced by C.I. 7018.

Data on growth type were received from only three stations. Only Appler was designated as decumbent at all points whereas 8 of the 24 entries were classed as upright at all 3 stations reporting.

Table 77. Entries included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or hybrid	Selection	Seed source
1815	Appler	Red Rustproof	Ga. (ck)
5207	Southland	(Iowa D69-Bond; CI 3841) x Fultex Fla. XM4111-1-13	Fla. (ck)
5371	Alamo	(Vict. x Haj.-Banger) x (Fulg.-Vict.) Tex. 73-44-90	Texas
5924	Seminole	Appler x (Clinton ² x Santa Fe) Fla. Row 6514	Fla.
6588	Floriland	Fla. 167 x Landhafer Fla. Sel.	Fla.
6600	Sunland	Fulghum CI 708 x Landhafer Fla. 12506	Fla.
6740	Wintok x (Clinton ² -Santa Fe)	Md. '52 803	Md. Ida.
6744	(Victoria x Haj.-Joan.) x (Fulghum-Victoria)	Tex. 4129-3-37	Tex.
6757	Fla. 167 x Landhafer) x Southland	Fla. XM0609-4 QR5330	Fla.
6922	(Atlantic x Clinton ² -Santa Fe) x (Hajira-Joanette)	Ida. Ab. 113	Md. Ida.
6978	Trispermia x (Clinton ² -Santa Fe)	Miss. S.C. 29	Miss.
6985	Atlantic x (Clinton ² -Santa Fe)	Md. Sel. 874	Md.
6986	Victorgrain 48-93	Coker's Breeding Stock	S. C.
6987	(Arlington-Delair) x Trispermia	Resel. 6908	S. C.
7011	(South.-Landhafer) x (Landhafer x Mindo x Hajira-Joanette)	Quincy 19-11	Fla.
7012	Bonda x Haj.-Joan. x Santa Fe) x Southland	Ab. 254	Fla.
7013	Haj.-Joan. x Bond-Rain. x Santa Fe: Minn. O-200-10) x South.	Ab. 314	Fla.
7014	(Mindo x Haj.-Joan. x Landhafer: Minn. 48-8) x Southland	Ab. 307	Fla.
7015	(Mindo x Haj.-Joan. x Landhafer: Minn. 48-8) x Southland	Ab. 308	Fla.
7016	Letoria x (Clinton ² -Santa Fe)	Md. CI. 6602 - 16	Md. Ida.
7017	Wintok x (Haj.-Joan. x Bond-Rainbow x Santa Fe)	Tifton 8307	Ga.
7018	Atlantic x (Clinton ² -Santa Fe)	Md. CI 6604 - 2	Md. Ida.
7019	Atlantic x (Clinton ² -Santa Fe)	Md. CI 6604 - 11	Md. Ida.
7023	(Mindo x Haj.-Joan. x Landhafer: Minn. 48-8) x Southland	Ab. 310	Fla.

Table 78. Summary of data obtained on the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

Rank in C.I. yield No.	Variety or selection	Acre yield (11 Sta)	Test wt. (6 Sta)	Plant ht. (5 Sta)	Lodg- ing (4 Sta)	Date head (7 Sta)	Date ripe (5 Sta)	Forage rating	
								Fall (3 Sta)	Spring (7 Sta)
		Bu.	Lbs.	Ins.	%			%	%
1	6986 Victorgrain 48-93	59.5	33.5	42.8	29.5	4/4	5/16	123.7	102.7
2	1815 Appler (ok)	56.3	30.0	38.8	52.0	14	18	100.0	100.0
3	5371 Alamo	53.2	34.1	37.2	18.3	1	16	120.0	118.9
4	6985 Atlantic x (Clinton ² -Santa Fe)	52.1	33.5	47.6	28.5	16	19	128.7	104.4
5	6978 Trispermia x (Clinton ² -Santa Fe)	51.9	32.7	40.8	25.3	13	20	129.3	109.6
6	6987 (Arlington-Delair) x Trispermia	51.4	33.6	38.6	59.3	2	15	127.7	109.1
7	6744 (Victoria x Haj.-Joan.) x (Fulg.-Vict.)	49.8	32.9	39.0	22.3	3	17	133.7	109.7
8	7023 (Mindo x H-J x Land.: Minn. 48-8) x South.	48.5	28.8	42.0	27.8	4	19	131.3	111.3
9	6740 Wintok x (Clinton ² -Santa Fe)	48.3	31.1	37.4	33.5	11	17	120.3	105.1
10	7019 Atlantic x (Clinton ² -Santa Fe)	48.1	30.4	43.8	11.0	15	19	112.3	102.7
11	7016 Letoria x (Clinton ² -Santa Fe)	47.2	29.7	44.6	11.0	16	19	117.0	102.3
12	6757 (Fla. 167 x Land.) x Southland	44.7	33.3	40.2	56.3	1	17	121.3	115.3
13	6922 (Atl. x Clinton ² -Santa Fe) x (Haj.-Joan.)	44.6	30.8	42.4	25.5	8	19	124.7	115.7
14	5924 Seminole	44.4	31.5	38.2	34.3	3/23	13	130.7	119.0
15	7017 Wintok x (H-J x Bond-Rain. x Santa Fe)	44.2	33.1	40.8	55.8	4/3	16	133.3	112.6
16	7015 (Mindo x H-J x Land.: Minn. 48-8) x South.	44.1	29.4	44.0	30.0	6	18	127.7	111.1
17	7014 (Mindo x H-J x Land.: Minn. 48-8) x South.	43.9	30.6	42.4	37.0	2	18	141.3	110.0
18	7013 (H-J x Bond-Rain. x SF: Minn. 0-200-10) x South.	43.4	32.7	42.6	51.5	3/30	16	133.3	118.0
19	5207 Southland	42.1	31.2	42.0	55.5	4/5	15	133.0	116.6
20	7011 (South.-Land.) x (Land. x Mindo x H-J)	41.8	32.7	39.4	45.0	3/29	15	125.3	110.1
21	7018 Atlantic x (Clinton ² -Santa Fe)	40.7	33.0	45.4	19.8	4/10	18	143.0	117.0
22	6588 Floriland	39.8	30.2	41.4	57.5	3/27	14	124.7	115.4
23	7012 (Bonda x H-J x Santa Fe) x Southland	37.7	31.1	41.8	37.0	31	14	127.7	110.6
24	6600 Sunland	37.6	31.7	40.2	60.8	26	13	127.7	119.9

Table 79. Yields on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55. 1/

C.I. No.	Variety or selection	Bushels										College Station Texas			
		Average 11 Stations	Ala.	Mesa Ariz.	Jay Fla.	Quincy Fla.	Tifton Ga.	Baton Rouge La.	Crowley La.	McNeill Miss.	Stoneville Miss.	Hartsville S. C.	College Station Texas		
6986	Victor grain 48-93	59.5	30.9	170.1	51.6	54.6	86.0	40.8	11.2	43.7	42.8	69.6	53.0		
1815	Appler (ck)	56.3	15.0	172.1	33.4	34.1	85.1	35.7	31.8	35.0	33.3	80.9	62.9		
5371	Alamo	53.2	10.8	164.3	45.0	51.6	65.3	58.7	3.7	34.1	26.0	71.9	54.0		
6985	Atlantic x (Clinton ² -Santa Fe)	52.1	40.8	152.5	47.8	43.8	74.4	25.5	12.1	34.1	39.4	51.6	51.4		
6978	Trispermia x (Clinton ² -Santa Fe)	51.9	13.9	170.3	42.1	47.8	63.4	41.7	11.1	29.5	29.3	72.9	49.0		
6987	(Arlington-Delair) x Trispermia	51.4	15.1	137.6	49.7	61.3	71.7	30.6	2.6	37.0	35.7	69.2	55.4		
6744	(Victoria x Haj.-Joan.) x (Fulghum-Vict.)	49.8	9.7	155.5	51.0	53.6	63.7	29.8	8.5	32.8	25.5	70.2	47.6		
7023	(Mindo x H-J x Land.: Minn. 48-8) x South.	48.5	21.6	151.2	31.7	48.5	62.8	32.3	18.9	27.5	28.3	62.8	42.6		
6740	Wintok x (Clinton ² -Santa Fe)	48.3	30.9	120.0	48.3	42.9	62.2	26.4	14.4	45.7	28.6	51.8	60.2		
7019	Atlantic x (Clinton ² -Santa Fe)	48.1	18.7	150.7	44.2	30.1	71.3	23.8	21.0	31.3	30.6	59.7	47.6		
7016	Letoria x (Clinton ² -Santa Fe)	47.2	20.7	156.6	42.0	32.8	65.0	25.5	15.8	25.9	24.8	59.7	50.8		
6757	(Fla. 167 x Land.) x Southland	44.7	9.1	128.9	34.5	35.9	64.1	30.6	23.5	16.8	25.5	77.3	45.9		
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Joan.	44.6	13.9	157.6	29.3	27.4	62.1	24.7	17.1	27.9	25.8	62.5	42.0		
5924	Seminole	44.4	13.3	144.4	33.4	47.6	62.2	23.8	4.8	31.9	25.7	70.6	30.2		
7017	Wintok x (H-J x Bond-Rain. x Santa Fe)	44.2	15.0	133.5	38.8	36.9	58.0	39.1	12.8	19.4	20.8	64.0	47.6		
7015	(Mindo x H-J x Land.: Minn. 48-8) x South.	44.1	18.7	125.2	28.5	44.1	59.3	27.2	11.2	43.2	26.1	54.2	47.4		
7014	(Mindo x H-J x Land.: Minn. 48-8) x South.	43.9	15.9	122.6	31.6	41.7	54.8	37.4	21.4	25.8	25.5	64.8	41.5		
7013	(H-J x Bond-Rain. x SF: Minn. 0-200-10) x South.	43.4	9.4	150.8	30.6	35.2	58.7	50.2	10.6	18.7	17.4	63.8	31.6		
5207	Southland	42.1	5.7	160.7	19.0	51.2	63.2	23.8	7.4	4.0	24.4	72.7	30.5		
7011	(South.-Land.) x (Land. x Mindo x H-J)	41.8	11.4	137.8	22.8	42.7	60.4	37.4	5.8	19.8	17.0	73.3	31.5		
7018	Atlantic x (Clinton ² -Santa Fe)	40.7	18.2	125.3	35.9	31.3	56.7	29.8	9.6	27.3	28.8	46.0	39.0		
6588	Floriland	39.8	9.7	137.4	18.4	26.7	66.3	22.1	15.5	19.1	19.7	62.7	40.4		
7012	(Bonda x H-J x Santa Fe) x Southland	37.7	14.0	119.4	23.4	39.0	64.2	34.9	9.0	15.8	15.8	48.9	30.8		
6600	Sunland	37.6	8.5	109.6	30.5	19.2	62.5	34.9	8.0	14.2	25.7	65.1	35.4		

1/ Camden and Headland, Ala., omitted from average as only one replicate given.

Table 80. Test weights on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 6 Stations	Mesa Ariz.	Quincy Fla.	Tifton Ga.	Stoneville Miss.	Hartsville S. C.	College Station Texas
Pounds								
5371	Alamo	34.1	39.1	35.0	32.0	30	32.3	36
6987	(Arlington-Delair) x Trispermia	33.6	39.6	31.0	33.5	27	32.3	38
6986	Victorgrain 48-93	33.5	39.5	30.0	34.5	29	31.1	37
6985	Atlantio x (Clinton ² -Santa Fe)	33.5	38.7	29.0	34.0	30	31.1	38
6757	(Fla. 167 x Land.) x Southland	33.3	39.9	30.0	32.5	29	31.6	37
7017	Wintok x (H-J x Bond-Rain. x Santa Fe)	33.1	39.4	29.0	34.0	28	31.9	36
7018	Atlantio x (Clinton ² -Santa Fe)	33.0	39.4	30.0	34.0	28	30.4	36
6744	(Victoria x H-J) x (Fulghum-Vict.)	32.9	37.0	33.0	33.0	29	31.5	34
6978	Trispermia x (Clinton ² -Santa Fe)	32.7	40.1	31.0	34.5	24	32.5	34
7013	(H-J x Bond-Rain x SF: Minn. 0-200-10) x South.	32.7	39.7	33.0	33.5	1/	31.4	31
7011	(South.-Land.) x (Land. x Mindo x H-J)	32.7	40.3	30.0	33.5	1/	31.9	34
6600	Sumland	31.7	40.4	30.0	32.0	26	26.8	35
5924	Seminole	31.5	37.5	30.0	30.0	30	30.7	31
5207	Southland	31.2	37.4	31.0	30.0	26	32.0	31
7012	(Bonda x H-J x Santa Fe) x Southland	31.1	38.5	31.0	32.5	26	27.6	31
6740	Wintok x (Clinton ² -Santa Fe)	31.1	34.8	29.5	30.5	27	31.8	33
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Joan.	30.8	37.3	30.0	30.0	26	30.4	31
7014	(Mindo x H-J x Land.:Minn.48-8) x South.	30.6	36.1	26.0	32.0	26	29.7	34
7019	Atlantio x (Clinton ² -Santa Fe)	30.4	37.9	25.0	33.0	26	29.6	31
6588	Floriland	30.2	37.0	27.0	32.0	1/	27.4	31
1815	Appler (ok)	30.0	39.2	20.0	31.0	28	25.8	36
7016	Latoria x (Clinton ² -Santa Fe)	29.7	37.2	26.0	30.5	23	27.2	34
7015	(Mindo x H-J x Land.:Minn.48-8) x South.	29.4	35.3	27.0	33.5	22	28.3	30
7023	(Mindo x H-J x Land.:Minn.48-8) x South.	28.8	34.6	28.0	31.0	22	27.4	30

1/Average of station (26.8) substituted for missing data.

Table 81. Survival on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55. 1/

C.I. No.	Average 2 Stations	Beltville, Md.	Hartsville, S. C.	Tifton, Ga. 2/
6740	100.0	100.0	100.0	40.0
6757	100.0	100.0	100.0	25.0
6987	100.0	100.0	100.0	15.0
7016	100.0	100.0	100.0	1.0
1815	100.0	100.0	100.0	0.0
6744	100.0	100.0	100.0	0.0
7018	100.0	100.0	100.0	0.0
7013	98.9	97.7	100.0	0.0
6986	98.2	96.4	100.0	25.0
5371	98.2	96.4	100.0	0.0
7015	97.5	100.0	95.0	2.0
5207	97.3	94.5	100.0	1.0
7017	97.1	94.2	100.0	30.0
7012	97.1	94.2	50.0	0.0
6588	95.8	96.6	95.0	5.0
6985	94.1	88.2	100.0	40.0
7014	93.9	97.7	90.0	25.0
6600	91.8	98.6	85.0	10.0
7023	91.3	97.5	85.0	0.0
7019	90.2	80.4	100.0	15.0
5924	89.1	88.2	90.0	0.0
7011	62.2	24.4	100.0	5.0
6922	60.2	35.3	85.0	0.0
6978	56.1	22.2	90.0	0.0

1/ 100% survival was reported at Jay, Fla.; Crowley, La.; and Stoneville, Miss.

2/ Tifton figures not included in average as they were obtained following 3 hours at 4° F. with previous hardening.

Table 82. Plant heights on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 5 Stations	Tallassee Ala.	Mesa Ariz.	Tifton Ga.	College Station Texas	Baton Rouge La.
		Inches					
5371	Alamo	37.2	38	41	34	29	44
6740	Wintok x (Clinton ² -Santa Fe)	37.4	43	40	34	34	46
5924	Seminole	38.2	40	40	35	30	46
6987	(Arlington-Delair) x Trispernia	38.6	38	38	35	34	48
1815	Appler (ck)	38.8	36	46	37	31	44
6744	(Victoria x H-J) x (Fulghum-Vict.)	39.0	35	41	37	34	48
7011	(South.-Land.) x (Land. x Mindo x H-J)	39.4	37	44	33	31	52
6600	Sunland	40.2	37	39	37	36	52
6757	(Fla. 167 x Land.) x Southland	40.2	39	44	36	34	48
7017	Wintok x (H-J x Bond-Rain x Santa Fe)	40.8	39	44	36	33	52
6978	Trispernia x (Clinton ² -Santa Fe)	40.8	37	42	37	36	52
6588	Floriland	41.4	38	46	37	36	50
7012	(Bonda x H-J x Santa Fe) x Southland	41.8	38	46	36	33	56
5207	Southland	42.0	38	47	36	35	54
7023	(Mindo x H-J x Land.:Minn.48-8) x South.	42.0	41	45	39	33	52
7014	(Mindo x H-J x Land.:Minn.48-8) x South.	42.4	38	48	36	36	54
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Joan.	42.4	41	45	40	36	50
7013	(H-J x Bond-Rain x SF: Minn.0-200-10) x South.	42.6	37	48	39	35	54
6986	Victorgrain 48-93	42.8	42	44	41	37	50
7019	Atlantic x (Clinton ² -Santa Fe)	43.8	44	44	44	37	50
7015	(Mindo x H-J x Land.:Minn.48-8) x South.	44.0	39	49	39	37	56
7016	Letoria x (Clinton ² -Santa Fe)	44.6	43	47	40	37	56
7018	Atlantic x (Clinton ² -Santa Fe)	45.4	43	44	42	38	60
6985	Atlantic x (Clinton ² -Santa Fe)	47.6	49	47	45	43	54

Table 83. Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average 4 Stations	Headland Ala. 1/	Tallassee Ala.	Mesa Ariz.	McNeill Miss.	Baton Rouge La.
		Percent					
7016	Lectoria x (Clinton ² -Santa Fe)	11.0	0	38	1	5	1
7019	Atlantic x (Clinton ² -Santa Fe)	11.0	0	38	1	5	1
5371	Alamo	18.3	0	67	1	5	1
7018	Atlantic x (Clinton ² -Santa Fe)	19.8	0	73	1	5	1
6744	(Victoria x H-J) x (Fulghum-Vict.)	22.3	2	83	1	5	1
6978	Trispermia x (Clinton ² -Santa Fe)	25.3	0	90	1	10	1
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Joan.	25.5	0	91	T	10	1
7023	(Mindo x H-J x Land.:Minn.48-8) x South.	27.8	0	80	-	30	1
6985	Atlantic x (Clinton ² -Santa Fe)	28.5	0	93	-	20	1
6986	Victor grain 48-93	29.5	0	63	1	35	20
7015	(Mindo x H-J x Land.:Minn.48-8) x South.	30.0	T	80	T	20	20
6740	Wintok x (Clinton ² -Santa Fe)	33.5	0	73	1	60	1
5924	Seminole	34.3	3	87	1	10	40
7012	(Bonda x H-J x Santa Fe) x Southland	37.0	T	73	T	55	20
7014	(Mindo x H-J x Land.:Minn.48-8) x South.	37.0	0	68	T	40	40
7011	(South.-Land.) x (Land. x Mindo x H-J)	45.0	0	80	1	40	60
7013	(H-J x Bond-Rain x SF: Minn.0-200-10) x South.	51.5	T	96	1	50	60
1815	Appler (ck)	52.0	T	98	1	70	40
5207	Southland	55.5	0	97	-	85	40
7017	Wintok x (H-J x Bond-Rain. x Santa Fe)	55.8	0	88	-	95	40
6757	(Fla. 167 x Land.) x Southland	56.3	0	95	1	70	60
6588	Floriland	57.5	3	85	1	85	60
6987	(Arlington-Delair) x Trispermia	59.3	0	92	1	85	60
6600	Sunland	60.8	0	88	1	95	60

1/ Figures recorded are average of 1 replicate. Data not included in station average.

Table 84. Dates of heading on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average Stations	Date						College Station Texas
			Mesa Ariz.	Jay Fla.	Quincy Fla.	Tifton Ga.	Crowley La.	Hartsville S. C.	
5924	Seminole	3/23	4/17	3/20	3/18	3/20	3/16	4/21	2/8
6600	Sunland	26	15	20	22	17	13	18	3/10
6588	Floriland	27	16	22	22	19	16	18	12
7011	{South.-Land.) x (Land. x Mindo x H-J)	29	16	26	22	28	16	21	2/8
7013	{H-J x Bond-Rain x SF: Minn. O-200-10) x South.	30	20	26	26	26	21	21	3/4
7012	{Bonda x H-J x Santa Fe) x Southland	31	17	19	25	22	19	26	2/21
6757	{Fla. 167 x Land.) x Southland	4/1	17	4/2	24	26	21	21	3/14
5371	Alamo	1	23	3/26	25	23	21	19	22
6987	{Arlington-Delair) x Trispernia	2	20	4/3	24	25	19	26	19
7014	{Mindo x H-J x Land. Minn. 48-8) x South.	2	18	4	4/2	25	26	21	10
6744	{Victoria x H-J) x (Fulghum-Vict.)	3	24	2	1	24	19	21	21
7017	{Wintok x (H-J x Bond-Rain. x Santa Fe)	3	22	3	3/29	22	26	24	19
7023	{Mindo x H-J x Land.: Minn. 48-8) x South.	4	18	6	4/3	25	23	26	16
6986	Victorgrain 48-93	4	20	9	2	25	26	24	12
5207	Southland	5	22	6	2	26	21	26	20
7015	{Mindo x H-J x Land.: Minn. 48-8) x South.	6	20	10	6	25	30	28	14
6922	{Atl. x Clinton ² -Santa Fe) x HaJ.-Joan.	8	24	10	7	27	19	27	30
7018	Atlantic x (Clinton ² -Santa Fe)	10	26	11	5	28	4/12	28	22
6740	Wintok x (Clinton ² -Santa Fe)	11	23	10	6	4/9	12	26	17
6978	Trispernia x (Clinton ² -Santa Fe)	13	25	16	6	3/28	12	5/1	4/2
1815	Appler (ck)	14	25	20	14	4/13	12	4/25	3/17
7019	Atlantic x (Clinton ² -Santa Fe)	15	27	20	15	10	12	30	22
6985	Atlantic x (Clinton ² -Santa Fe)	16	21	22	12	16	12	28	31
7016	Letoria x (Clinton ² -Santa Fe)	16	28	20	15	11	12	5/1	21

Table 85. Dates of ripening on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Average Stations 5	Tallassee Ala.	Mesa Ariz.	McNeill Miss. 1/	College Station Texas	Baton Rouge La.	Date	
6600	Sumland	5/13	6/1	5/31	5/9	4/24	4/28		
5924	Seminole	13	1	6/2	9	20	28		
7012	(Bonda x H-J x Santa Fe) x Southland	14	1	1	9	26	30		
6588	Floriland	14	1	1	9	27	28		
6987	(Arlington-Delair) x Trispernia	15	1	3	12	25	5/2		
7011	(South.-Land.) x (Land. x Mindo x H-J)	15	1	1	9	25	6		
5207	Southland	15	1	2	9	29	2		
7013	(H-J x Bond-Rain x SF: Minn. O-200-10) x South.	16	1	5/31	9	26	8		
5371	Alamo	16	1	6/2	9	26	10		
7017	Wintok x (H-J x Bond-Rain. x Santa Fe)	16	5/29	3	9	29	5		
6986	Victorgrain 48-93	16	6/1	2	9	27	6		
6757	(Fla. 167 x Land.) x Southland	17	1	2	9	29	8		
6744	(Victoria x H-J) x (Fulghum-Viot.)	17	1	3	9	29	10		
6740	Wintok x (Clinton ² -Santa Fe)	17	1	3	12	27	8		
7014	(Mindo x H-J x Land.: Minn. 48-8) x South.	18	1	1	12	30	10		
7015	(Mindo x H-J x Land.: Minn. 48-8) x South.	18	1	2	15	30	10		
1815	Appler (ok)	18	1	4	9	5/4	10		
7018	Atlantic x (Clinton ² -Santa Fe)	18	1	4	9	4/30	12		
7023	(Mindo x H-J x Land.: Minn. 48-8) x South.	19	1	1	15	5/4	12		
7016	Lectoria x (Clinton ² -Santa Fe)	19	1	4	12	4/30	12		
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Joan.	19	1	3	9	5/4	12		
7019	Atlantic x (Clinton ² -Santa Fe)	19	1	5	9	5	12		
6985	Atlantic x (Clinton ² -Santa Fe)	19	1	3	9	5	14		
6978	Trispernia x (Clinton ² -Santa Fe)	20	1	5	12	6	12		

^{1/} Actually date harvested but believed sufficiently reliable to use as date ripe in this compilation.

Table 8. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Crown rust			Stem rust			H. avenae				Mosaic		Leaf blight	Halo blight	Septoria	Blast
		Tifton Ga.	Baton Rouge La.	College Sta- tion, Texas	Baton Rouge La.	College Sta- tion, Texas	Headland Ala.	Tifton Ga.	2/ Ga.	Tifton Ga.	Baton Rouge La.	Headland Ala.	Yemassee S. C.	Headland Ala.	Headland Ala.	Headland Ala.	Headland Ala.
6957	(Arlington-Delair) x Trispermia	HR	70-I	0	80-CS	20	0	0	0	0	-	2	1	0	T	0	0
6600	Sunland	CS-20	-	E	30-CS	35	0	11	79	0	-	3	0	T	T	0	0
6757	{Fla. 167 x Land.} x Southland	HR	-	0	50-CS	5	0	8	23	0	-	5	1	0	0	T	0
7011	{South.-Land.} x (Land. x Mindo x H-J)	HR	-	0	70-CS	25	0	0	0	0	-	5	1	0	0	0	0
5207	Southland	CS-50	30-R	0	70-CS	25	0	87	75	0	-	5	0	0	0	0	0
7012	(Bonda x H-J x Santa Fe) x Southland	HR	T	0	T	0	0	72	70	0	-	3	2	2	2	2	2
7013	(H-J x Bond-Rain x SF: Minn. 0-200-10) x South.	HR	-	0	0	T	0	67	46	0	-	2	2	T	T	2	2
7014	{Mindo x H-J x Land.: Minn. 48-8} x South.	HR	0	0	0	0	0	38	8	0	-	3	4	0	2	2	2
7015	{Mindo x H-J x Land.: Minn. 48-8} x South.	HR	0	0	T	0	0	8	8	0	-	15	4	0	3	3	3
7023	{Mindo x H-J x Land.: Minn. 48-8} x South.	HR	0	0	0	0	0	17	38	0	-	15	4	0	3	3	3
7016	Letoria x (Clinton ² Santa Fe)	HR	0	0	20-HR	10	0	93	57	0	-	20	2	0	0	0	0
1515	Appler (ck)	R/S-5	40-I	T	50-S	10	0	11	61	0	-	5	0	3	0	5	5
5371	Alamo	CS-20	0	0	0	0	T	82	71	0	10	5	2	0	0	0	20
6744	(Victoria x H-J) x (Fulghum-Vict.)	HR-10	20-R	0	60-CS	15	0	8	11	0	-	15	4	0	T	0	3
5924	Seminole	HR	0	E	70-CS	20	0	0	0	0	-	20	1	T	T	2	5
6558	Floriland	HR	0	0	40-I	20	0	24	82	0	-	3	0	T	3	T	5
6740	Wintok x (Clinton ² Santa Fe)	CS-25	20-I	0	50-R	20	3	76	70	5	5	15	1	T	3	1	5
7017	Wintok x (H-J x Bond-Rain. x Santa Fe)	R-tr.	30-R	0	40-I	T	3	32	53	5	5	3	3	T	3	2	3
6986	Victorgrain 48-93	CS-20	0	0	70-S	20	0	9	63	0	-	15	0	0	2	0	15
6922	(Atl. x Clinton ² Santa Fe) x Raj.-Joan.	R	0	0	0	0	0	100	85	0	-	5	1	0	0	0	20
7018	Atlantic x (Clinton ² Santa Fe)	HR	0	0	15-HR	25	5	100	82	5	T	5	1	0	0	0	5
7019	Atlantic x (Clinton ² Santa Fe)	HR	0	0	25-R	25	5	85	50	0	-	0	1	0	0	0	5
6985	Atlantic x (Clinton ² Santa Fe)	CS-30	0	0	20-R	30	0	72	50	0	-	T	0	0	0	0	20
6978	Trispermia x (Clinton ² Santa Fe)	CS-50	0	0	0	25	0	0	0	0	-	0	1	0	0	0	15

1/u. avenae

2/Source of inoculum used was from Tifton.

3/Source of inoculum used was from Coker's Pedigreed Seed Co.

4/Mosaic scale at Yemassee: 0 = highly resistant; 4 = completely susceptible; very severe damage.

Table 87. Estimates of forage growth in the Fall and Spring on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	FALL				SPRING							
		Average 3 Stations	Quincy Fla.	Titton Ga.	College Sta- tion, Texas	Average 7 Stations	Jay Fla.	Quincy Fla.	Titton Ga.	Stoneville Miss.	Hartsville S. C.	College Sta- tion, Texas	Yemassee S. C.
6987	(Arlington-Delair) x Trispermia	127.7	114	164	105	109.1	136	120	108	100	110	100	90
6600	Sunland	127.7	114	159	110	119.9	170	133	112	99	105	110	110
6757	{ Fla. 167 x Land. } x Southland	121.3	115	149	100	115.3	150	120	110	102	110	100	115
7011	{ South.-Land. } x { Land. x Mindo x H-J }	125.3	121	130	125	110.1	183	135	104	59	110	90	90
5207	Southland	133.0	123	161	115	116.6	141	133	108	99	120	105	110
7012	(Bonda x H-J x Santa Fe) x Southland	127.7	123	140	120	110.6	161	131	106	101	75	110	90
7013	(H-J x Bond-Rain x SF: Minn. 0-200-10) x South.	133.3	124	156	120	118.0	183	136	106	96	115	100	90
7014	{ Mindo x H-J x Land.: Minn. 48-8 } x South.	141.3	118	191	115	110.0	156	120	106	98	110	105	75
7015	{ Mindo x H-J x Land.: Minn. 48-8 } x South.	127.7	115	153	115	111.1	166	118	106	98	105	105	80
7023	{ Mindo x H-J x Land.: Minn. 48-8 } x South.	131.3	121	153	120	111.3	158	121	106	99	100	105	90
7016	Letoria x { Clinton ² -Santa Fe }	117.0	109	142	100	102.3	113	114	104	105	100	90	90
1815	Appler (ok)	100.0	100	100	100	100.0	100	100	100	100	100	100	100
5371	Alamo	120.0	118	132	110	118.9	166	124	106	101	120	105	110
6744	(Victoria x H-J) x (Fulghum-Vict.)	133.7	118	168	115	109.7	151	123	104	100	120	110	60
5924	Seminole	130.7	123	159	110	119.0	163	140	104	86	110	105	125
6588	Floriland	124.7	114	160	100	115.4	133	129	110	106	110	95	125
6740	Wintek x { Clinton ² -Santa Fe }	120.3	110	146	105	105.1	111	113	106	101	100	90	115
7017	Wintek x (H-J x Bond-Rain. x Santa Fe)	133.3	115	185	100	112.6	135	124	110	109	100	100	110
6986	Victor grain 48-93	123.7	110	151	110	102.7	110	116	108	105	90	90	100
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Joan.	124.7	121	133	120	115.7	170	119	106	90	100	110	115
7018	Atlantic x { Clinton ² -Santa Fe }	143.0	120	194	115	117.0	158	120	112	99	110	110	110
7019	Atlantic x { Clinton ² -Santa Fe }	112.3	108	129	100	102.7	110	109	108	102	100	100	90
6985	Atlantic x { Clinton ² -Santa Fe }	128.7	113	168	105	104.4	125	109	106	96	100	95	100
6978	Trispermia x (Clinton ² -Santa Fe)	129.3	120	163	105	109.6	138	123	110	96	105	105	90

1/Forage scale at Quincy and Jay, Fla., and Hartsville and Yemassee, S. C. is Appler.

2/Forage from clipping test.

Table 88. Type of plant growth on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1954-55.

C.I. No.	Variety or selection	Quincy Fla.	Stoneville Miss.	Hartsville S. C.	SUMMARY		
					<u>1/</u>		
					D	I	U
6987	(Arlington-Delair) x Trispermia	I-U	I	I	0	3	0
6600	Sumland	U	U	U	0	0	3
6757	(Fla. 167 x Land.) x Southland	U	I-U	U	0	1	2
7011	(South.-Land.) x (Land. x Mindo x H-J)	U	U	I	0	1	2
5207	Southland	U	U	U	0	0	3
7012	(Bonda x H-J x Santa Fe) x Southland	U	U	U	0	0	3
7013	(H-J x Bond-Rain x SF: Minn. 0-200-10) x South.	U	U	U	0	0	3
7014	(Mindo x H-J x Land.: Minn. 48-8) x South.	U	I	U	0	1	2
7015	(Mindo x H-J x Land.: Minn. 48-8) x South.	U	I-U	U	0	1	2
7023	(Mindo x H-J x Land.: Minn. 48-8) x South.	U	U	U	0	0	3
7016	Latoria x (Clinton ² -Santa Fe)	I-U	I-D	D	1	2	0
1815	Appler (ck)	D	D	D	3	0	0
5371	Alamo	U	U	U	0	0	3
6744	(Victoria x H-J) x (Fulghum-Vict.)	U	I	I	0	2	1
5924	Seminole	U	U	U	0	0	3
6588	Floriland	I-U	I	U	0	2	1
6740	Wintok x (Clinton ² -Santa Fe)	I-U	I	D	1	2	0
7017	Wintok x (H-J x Bond-Rain. x Santa Fe)	U	I-D	D	1	1	1
6986	Victorgrain 48-93	I	I-D	D	1	2	0
6922	(Atl. x Clinton ² -Santa Fe) x Haj.-Jean.	U	U	U	0	0	3
7018	Atlantic x (Clinton ² -Santa Fe)	U	I	I	0	2	1
7019	Atlantic x (Clinton ² -Santa Fe)	I-U	I	D	1	2	0
6985	Atlantic x (Clinton ² -Santa Fe)	I-U	D	I	1	2	0
6978	Trispermia x (Clinton ² -Santa Fe)	U	I-U	U	0	1	2

1/ D = Decumbent; I = Intermediate; U = Upright.

UNIFORM WINTER HARDINESS NURSERY

The Uniform Winter Hardiness Nursery was seeded on 46 stations in the fall of 1954 and reports were received from 44. Summary data appear in Table 89. Data from individual stations were included in a previous report. At many stations the seeding was done in a dry seed bed and emergence of plants was slow and uneven. Probably some seedlings died prior to the receipt of moisture in the fall. Thus stands in many of these nurseries were not up to average and the plants went into the winter in rather poor condition. The early winter of 1954-55 was not so severe as many recent winters and a sufficient number of plants eventually emerged for stands to become reasonably satisfactory when spring arrived.

In late March a sudden thrust of unseasonably cold weather occurred which swept across the central part of the winter oat area from Texas to the Atlantic Coast. This injured oats in a wide area by freezing them to the ground. Injury was less severe on the more northern stations where oats were less far advanced but oats as far south as Gainesville, Fla. were hurt severely. This freeze came after most of the hardiness data had been recorded and tabulated and the summary included only partially reflects the damage from that storm.

According to survival records the highest survivals were recorded for C.I. No's. 5364, 6980 and Wintok, which survived 78.5, 75.9 and 70.3 percent respectively. Fulwin survived 69.2 percent. The poorest records were recorded for C.I. 6987, Fulghum, C.I. 708 and Appler which survived only 32.2, 34.6 and 35.2 percent respectively. A half century ago Fulghum, Appler (Red Rustproof), and Winter Turf which survived 53.2 percent were among leading oat varieties for fall seeding in this country. Lee, a leading oat a quarter century ago, survived 54.5 percent. Hence the progress made in breeding hardier oats for fall seeding is evident. Unfortunately no selection having considerable disease resistance was especially hardy in this nursery in 1954-55. Thus oat breeders realize much remains to be done in breeding satisfactory hardy, high yielding, disease resistant oats for fall seeding.

Table 89. Summary Data on Survival of Oats Included in the Uniform Winter Hardiness Nursery Grown in 1954-55. ^{1/}

Rank	C.I. No.	Variety or Selection	Average (28 Sta.)
1	5364	New York Sel.	78.5
2	6980	Ballard: Ky 45-65	75.9
3	3424	Wintok	70.3
4	3168	Fulwin	69.2
5	6905	Ballard: Ky 45-34	68.9
6	6572	Dubois	68.5
7	6727	Clinton x Forkeddeer: Purdue 4011-14-4-3	66.5
8	6903	(Lee-Vic.) x Forkeddeer ² Purdue 392A2-13-1-2-1	66.2
9	6982	Clinton x Forkeddeer: Purdue 4011-16-5-4	65.4
10	3170	Forkeddeer	65.1
11	6981	Forkeddeer (cold treated)	65.0
12	5106	Cimarron	64.3
13	6988	Cimarron x Traveler Okla. 51394	62.7
14	6901	(Lee-Victoria) x Fulwin	62.6
15	6983	Clinton-Forkeddeer x Wintok - Ark. 674: Purdue RA473A2-13	62.3
16	6902	Stanton: Okla. Str. 512336	62.2
17	5368	Clinton x Hairy Culberson	61.3
18	2505	Hairy Culberson	60.7
19	6989	Cimarron x Traveler: Okla. 513861	59.9
20	2499	Pentagon	59.5
21	6984	Clinton-Forkeddeer-Wintok-Ark. 674: Purdue RB473A4-7	56.7
22	6979	Fulgrain Strain 6 x Forkeddeer: Tenn. 17-410-76	55.5
23	947	Tech	54.5
24	3296	Winter Turf (check)	53.2
25	2042	Lee	48.3
26	6740	Wintok x (Cl ² x S. F.)	44.4
27	6986	Victorgrain 48-93: Coker's '55 B.F.S.	40.6
28	6985	Atlantic x (Cl ² x S. F.): Sel. 824	38.7
29	1815	Appler	35.2
30	708	Fulghum	34.6
31	6987	(Arl.-Del.) x Trispermia: Coker's Bulk Sel. C.I. 6908	32.2

^{1/} On 12 stations: Stuttgart, Ark.; Experiment, Ga.; Hopkinsville, Ky.; Stoneville, Miss.; Stillwater, Okla.; Chester, Clemson and Hartsville, S. C.; Denton and Greenville, Tex.; Morgantown and Wardsville, W. Va., all entries survived 100 percent. All entries were killed at Athens and Blairsville, Ga.; Urbana, Ill. and Ames, Iowa.

ALASKA

The 35 entries included in the Uniform Northwestern States Oat Nursery were also sown at Fairbanks and Palmer, Alaska. Golden Rain, the standard check variety in Alaska was seeded as an additional check entry. Data from Alaska are presented in Table 90.

Yield, Bushels per Acre

The yields of oats on the Palmer station were in general only slightly below, whereas those at Fairbanks were somewhat above those produced in 1954. As a result the two-station average of most entries was higher than for the previous year.

Andrew x Clinton, C.I. 5658, produced unusually high yields at Palmer and ranked sixth in yield at Fairbanks. C.I. 5658, Garry, Craig, C.I. Nos. 6613 and 5345 were the five highest yielding oats at Palmer. Rodney, Dannock, C.I. 3865, and Exeter were the four oats producing the highest yields at Fairbanks. Each averaged more than 100 bushels per acre. Rodney was the only entry among the higher yielding oats in Alaska in both 1954 and 1955. This oat has also shown considerable promise throughout the Northwest Region of the United States. In Alaska many of the early oat entries from the North Central Region produced better yields in 1955 than in 1954. Park, an outstanding oat in the Northwestern States, has been among the very poor yielding entries in tests in Alaska. This is a little difficult to understand.

Test Weight

Oats grown at Fairbanks were much heavier in weight per bushel than were those grown at Palmer. Overland and Garry were the heaviest oats at Fairbanks, each having an average test weight of 43.8 pounds per bushel whereas C.I. 5347 was the heaviest oat at Palmer, weighing 38.5 pounds per bushel. The entries Victory and C.I. No's. 5345 and 5346 ranked high, testing only one-half pound lighter than C.I. 5347. Jackson and Waubay produced heavy oats in the Alaska tests but were not as outstanding in this respect as they were in tests in the Northwestern Region in 1955.

Plant Height

Oats grew much taller at Palmer than at Fairbanks. The tallest entry at Fairbanks was Shasta and Clinton 59 and Winema were the shortest. At Palmer Shasta was tallest and Cody, Clinton 59 and Winema were the shortest strawed entries.

Standing Ability

Much more lodging was recorded at the Alaska stations in 1955 than in the Northwestern region. C.I. No's. 5347, 5658 and 6612, Clintland and Clinton 59 were the strongest strawed entries at Palmer, having lodging averages ranging from 42 to 46 percent. Oats lodged much less at Fairbanks than at Palmer. Sixteen entries at Fairbanks lodged less than 10 percent. Although Rodney has an excellent yield and test weight record in Alaska it is inferior in straw strength.

Date Headed

At both Fairbanks and Palmer all entries headed during the latter half of July. These oats were approximately a week later in heading at Palmer than at Fairbanks. Contrary to previous results there did not appear to be a high correlation between late maturity and yield in oats grown in Alaska in 1955.

Date Ripe

There did not appear to be much correlation between date of heading and date of ripening. However early heading entries rarely ripen extremely later or late entries very early.

Table 90. Data on oats in the Uniform Northwestern States Nursery grown on Alaska stations in 1955.

C.I. No.	Variety, hybrid or selection	Average yield 2 stations	Fairbanks					Palmer						
			Yield Bu/A.	Test wt. Lbs.	Ht. In.	Lodg- ing %	Date head	Date ripe	Yield Bu/A.	Test wt. Lbs.	Ht. In.	Lodg- ing %	Date head	Date ripe
5658	Andrew x Clinton	106.5	97.2	40.3	40	4	7/22	9/10	115.9	36.5	43	42	7/25	9/9
6613	C.I. 4189 x Overland	94.8	94.2	41.2	39	4	28	20	95.5	35.5	43	71	31	20
2592	Bannock	94.6	108.4	41.5	40	50	27	20	80.9	36.5	46	88	29	18
4158	Exeter	91.2	100.0	42.7	41	54	28	19	82.5	34.5	43	92	31	19
	Golden Rain	90.2	87.1	41.7	43	8	26	17	93.4	37.5	48	58	28	16
6661	Rodney	90.0	112.2	43.3	42	21	26	21	67.9	36.5	43	71	30	18
5332	Craig	89.9	84.1	40.7	33	0	27	16	95.7	36.0	36	79	31	5
5946	Sauk	89.0	94.1	41.7	38	12	27	19	84.0	37.0	41	54	30	14
6537	(Victoria x H-B) x Colo	89.0	88.3	41.5	39	25	22	16	89.7	35.5	42	58	25	7
5226	Fortune	88.6	92.5	40.5	41	12	24	16	84.8	33.0	46	67	29	16
3865	(V-R) x Bannock	87.8	100.4	39.3	36	12	24	18	75.2	36.5	43	62	30	18
5345	Clinton x Overland ²	85.7	77.3	41.3	36	0	28	15	94.2	38.0	42	62	31	19
3976	Shasta	85.1	98.2	41.8	44	33	27	22	72.0	35.0	47	79	31	19
4373	Winema	84.8	78.2	40.7	31	12	27	18	91.5	34.0	36	67	25	5
4157	Ajax (ok)	84.7	93.2	40.8	41	12	25	11	76.2	35.5	46	75	26	8
5347	C.I. 4189 x Overland	82.7	73.1	41.3	32	0	24	16	92.3	38.5	37	46	29	17
5441	Jackson	82.1	85.2	40.7	36	4	21	10	79.0	36.5	39	50	24	4
6648	Garry	81.3	66.4	43.8	39	8	26	18	96.2	37.0	42	50	28	12
5657	Andrew x Clinton	81.1	74.6	36.8	34	12	21	8	87.6	35.0	40	71	24	5
4170	Andrew	80.6	76.4	41.7	39	38	21	16	84.8	35.5	43	62	23	4
2053	Markton	80.4	86.0	41.5	42	21	22	19	74.9	35.5	44	83	27	17
4372	Shelby	79.2	77.8	43.7	41	17	27	19	80.7	36.0	45	71	30	19
6612	(B-A) x (Iogold x V-R)	79.1	72.7	41.8	32	8	27	20	85.5	37.5	37	42	30	17
1145	Victory	78.6	85.4	43.8	41	38	28	18	71.9	37.0	48	83	30	19
4181	Overland	78.5	76.2	42.5	34	8	25	19	80.9	38.0	37	54	27	16
6767	Simcoe	77.0	76.1	41.2	41	21	22	12	78.0	32.5	42	50	26	11
5346	Clinton x Overland ²	74.9	62.6	41.7	34	17	27	19	87.2	38.0	42	58	30	17
3916	Cody	73.1	87.9	42.5	33	25	28	20	58.3	35.5	36	50	8/1	18
6662	Improved Garry	71.4	68.9	43.0	40	4	26	16	73.9	36.0	45	71	7/29	16
6765	Minland	68.9	71.5	36.8	40	12	20	11	66.4	33.0	42	50	22	5
5869	Clintarf	67.1	70.6	39.5	36	0	25	10	63.6	34.0	41	50	28	9
5440	Waubay	66.4	51.4	40.5	37	8	21	10	81.4	35.5	40	75	23	8
6611	Park	61.6	69.4	41.7	41	17	20	17	53.8	34.0	45	71	22	16
5647	Clarion	60.2	56.8	40.8	35	0	18	5	63.6	35.0	39	75	22	11
4259	Clinton 59	53.6	28.0	41.8	30	0	20	3	79.2	34.0	36	46	23	3
6701	Clintonland	50.1	38.3	33.3	33	0	20	5	61.9	31.5	40	46	25	8

